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MERIDIAN CIRCLE OBSERVATIONS

MADE AT

THE LICK OBSERVATORY,

UNIVERSITY OF CALIFORNIA,

1901-1906.

BY

R. H. TUCKER,
ASTRONOMER IN THE LICK OBSERVATORY.

PREFACE.

This third volume of Meridian Circle results contains the observations made for the Zodiacal Catalogue, including those for the determination of the additional Fundamental stars; the observations of a list of stars found among the records of Piazzi, but not included in his Catalogue; and the observations of a list of Latitude stars, for Prof. C. L. Doolittle. Except for the last named list, these observations were made between June 1, 1901, and June 1, 1904. The results of an investigation of the 10′ division errors of the circles, which ended in April, 1905, are also included in this volume.

In July, 1905, observations of a fundamental character were begun with the meridian instrument, and will form part of a later volume. During the first year of this undertaking, the above mentioned list of Latitude stars was also observed.

The present volume contains the results of about 9200 observations, for the determination of the places of 3175 stars. These observations were made without assistance. The three Meridian Circle volumes include the results of 25,000 complete observations, besides 3000 observations in one coördinate only.

Acknowledgments are due to the Carnegie Institution of Washington, for supplying an assistant during two years of the period covered by this volume. He took part in the investigation of the graduated circles, and in the reduction of observations.

RICHARD H. TUCKER.

Lick Observatory, March, 1907.

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THE ZODIACAL CATALOGUE.

Description. The observations for the Zodiacal Catalogue include all the stars in the list arranged by Sir David Gill, in 1899, in conformity with the resolutions of the International Conference for Fundamental Stars. The design of the list is to furnish accurate places for heliometer measures of the planets, and of the Moon. It is planned to contain at least one star within two degrees of any object within the zone of the zodiac. It includes 2798 stars, varying from 90 to 139 per hour, with an average of 117. A few additional stars have been observed here.

Some stars included in this list had been previously observed here, to furnish places for special heliometer measures, and the earlier observations were published in Volume VI of the Publications of this Observatory. These observations have been reduced to the system of the full zodiacal catalogue, and will be found in a later section of this volume. The observations for other special lists, printed in Lick Observatory Bulletin No. 43, are incorporated in the present catalogue, having been made during the progress of this work.

Observations upon this list were first begun here in September, 1900, when a program of four hours, containing 100 stars, was twice observed, with the assistance of Dr. R. T. Crawford, who read the circle microscopes. The observation of the *Eros* stars, undertaken immediately after this date, the results of which are contained in Volume VI, caused the suspension of work on the zodiacal list; and this was not resumed until June, 1901, when observations were begun alone. The entire list was completed, without assistance in observing, in April, 1904. The observations of 1900, being isolated in epoch, have not been reduced.

The first six programs were four hours in length, and contained an average of 66 stars. The following programs were three hours long, and contained 52 stars for a full program, though ten were of smaller extent. In all, about 8100 observations were made for this catalogue; including about 600 for the special heliometer lists, and 900 for the determination of the extra Fundamental stars. These were contained in 72 programs for the zodiacal list, and 12 programs for the extra Fundamental stars. The Nadir observations are included in this enumeration.

Though the work extended through a period of nearly three years, but two thirds of that time was actually used for the prosecution of the zodiacal list alone. This was mainly due to the difference in the observing conditions, during different seasons of the year. While one summer season sufficed for the complete observation of one portion of the work, three winters were required for the opposite portion. Thus, four hours of right ascension were completed in one season; twelve were finished in two seasons, each; and the remaining eight hours required three seasons.

Average conditions of fair quality throughout the year would be more favorable for the prosecution of Meridian Circle work, in general. The winters here permit of some good observing, at intervals, as a rule; but there are usually some long gaps of stormy weather, in which no observations of any character can be secured. Thus, in 1902 and 1903, there were gaps of about seven and six weeks, respectively; and in 1904, two gaps of four weeks each, nearly adjacent. The present winter season, 1906–1907, has included nearly four months of stormy weather, broken by only a few short periods of fair conditions. Only once during this period has it been possible to secure a fundamental series of observations, embracing two consecutive nights, and the corresponding day observations. Fortunately such protracted stormy spells have not been usual.

The extension of a program into the late hours of the night is the best preparation for the uncertainties of the winter season, but the stormy weather often extends into late spring. In all, three calendar months were used once, for the zodiacal list, four months twice, and five were included three times. Of the last group, several separate months were entirely barren of opportunities for observing, as the record of stormy intervals is evidence. It is necessary to use but a limited proportion of the best observing weather, in summer, in order to keep pace with the winter conditions. And, in general, two winters can be allowed for the equivalent of one summer's work.

For the reduction of the observations, the places of those Fundamental stars, which were selected by Dr. Gill, but which are not included in Newcomb's Catalogue, were required. No discussion of the places of these stars has yet appeared. All of them have been observed here, with special attention to combining the list with Newcomb's system; and in default of other places, the determinations made here have been adopted in the reductions. During the progress of this work, a list of uncatalogued Piazzi stars was also observed. And, during the year 1905–1906, devoted to observations of a fundamental character, a list of Latitude stars was observed. The details of these observations will appear in later sections of this volume; except the fundamental work, which will be reserved for publication in a later issue.

The distribution of the observations is summed up, below, for matter of record. Toward the close of this work, and after its finish, some eighteen months, October 1903–April 1905, were devoted largely to the measurement of the 10′ division errors. The two circles were read, simultaneously, by Carnegie Assistant Elliott Smith and myself, for this purpose. The results will be found in a later section of this volume, and the distribution of the readings, only, is recorded here, in round numbers.

DISTRIBUTION OF THE OBSERVATIONS.

Year.	Zodiacal List.	Other Lists.	Circle Readings, Division Error.
1901	2,600	. . .	. . .
1902	2,600	500	. . .
1903	1,500	600	5,000
1904	500	300	20,000
1905	. . .	300	6,000
1906	. . .	300	. . .
Sum,	7,200	2,000	31,000
1905–1906	. . .	(2,000)	Fundamental program.

The Zodiacal stars number	2,839
The Piazzi stars and Fundamentals	150
The Latitude stars and Fundamentals	126
Miscellaneous stars	15
Circumpolar stars	45

For the reduction of the observations of the zodiacal list, some computing assistance has been available, amounting in all to the equivalent of two years' work of one computer. This aid was furnished by funds of the Carnegie Institution. The reductions were entirely completed in 1906.

The Fundamental System. The places of such stars, selected by Dr. Gill, as are found in Newcomb's *Catalogue of Fundamental Stars for the Epochs 1875 and 1900*, have been taken directly from that catalogue, and have been brought up to the date of observation with the use of Newcomb's proper motions. The remaining stars, selected as fundamental, have been determined here. The details of observation, corresponding to both sets of stars, will follow in later sections. All of the Fundamental stars are included in the zodiacal list itself, and the observed places, with those of a few additional stars employed with the heliometer lists, will be found in the complete catalogue of this volume.

Eight Fundamental stars were usually observed in each program of three hours. No distinction in their use was made between the stars from Newcomb's Catalogue, and the additional Fundamental stars, which were determined here with that catalogue as basis. One pair of circumpolar stars was observed in each program, and two Nadirs, with two or three readings on the Mire.

The Magnitude Equation in Transits. During the progress of this work a series of screen observations was made, in July, 1902, for the purpose of measuring the effect of magnitude upon the chronographic record of transits. As in the earlier sets made for this purpose, one half the list of stars was screened each night, the alternate stars being similarly reduced on the succeeding night of observation. The methods of observing, and of reducing the observations, may be confidently claimed to eliminate all the errors, except those due to the effect of magnitude, and the accidental errors of observation.

The appearance of the screened star is entirely similar to that of a naturally faint star, except for the brightest stars, which show some diffraction effects, which do not interfere with the image of the star. The observer is conscious of no personal equation in making the transit record, and the quantities concerned appear to be entirely too small to be perceptible in the process of measurement. The correction appears to be consistent, for the same observer, as will be evident from the summary below. The same screen has been used throughout, the effect being to reduce the brightness by about three and one half magnitudes, varying slightly for the different orders of brilliancy, apparently. The effect is determined by the difference between the magnitude from the ephemeris, or some standard catalogue, and the estimated magnitude at the transit. This last is not likely to be much in error, for estimates of faint stars can be made with considerable precision with this telescope. The illumination of the field has not been changed, as a rule, and remained the same throughout the observations of a set, each night.

The observations for magnitude equation, completed early in 1907, are included in the tabulation below. These were made upon stars both south and north of the zenith, for the purpose of solving the question of a difference in the respective corrections. There is a distinct difference in my personal equation in transits, which has been repeatedly measured by observing stars at the zenith, and which has been found to be equivalent to a correction to stars observed facing north of — $0^s.030$, or — $0^s.024 \sec \delta$. The fundamental program of observing will include additional determinations of this correction. It has always been eliminated in the determinations of Right Ascension, by observing Fundamental stars, and those to be determined, facing the same way.

The measures of both sets of stars have been divided into two groups, according to magnitude, to determine whether there is any variation in the magnitude equation, for different parts of the scale. The results may be briefly summarized, from the details below. The magnitude equation for South stars appears to be consistent, for the period of observation, more than ten years. There is no evident variation for the range of magnitude included in the mean results, and the correction may be assumed to be of a simple linear form.

For North stars, the magnitude equation, while of the same sign, is double the amount of that for South stars, when reduced to equatorial interval, and there is some clear evidence of a variation. While the interval may not be considered sufficiently large to safely extend this rate out to the extreme limits of the scale, the computation of the variable equation has been given below, for comparison with that of a uniform equation. Two lists of stars were observed north of the zenith, and separately reduced. The equation for South stars had been previously determined, and only required confirmatory test.

MAGNITUDE EQUATION: STARS SOUTH OF ZENITH.

Date.	No. Det.	Δ Mag.	Δ α	p. e. 1 Det.	Mag. Eq.
			s	s	s
1896	75	4.0	- 0.034	± .021	- .009
1898	60	3.3	.019	.024	- .006
1902	48	3.9	.024	.028	- .006
1907	49	3.6	.037	.033	- .010
Mean . . .	232	3.7	- .029	± .026	- .008
Probable error,			± .002		± .001

GROUPS ARRANGED BY MAGNITUDE, 1907: SOUTH STARS.

Stars.	Magnitude.	Mean.	Reduced.	Δ	Δ α	p. e.	Mag. Eq.	p. e.
					s	s	s	s
23	2.0 - 5.0	3.7	7.4	3.7	0.037	±.006	- .010	±.002
26	5.1 - 6.5	5.7	9.1	3.4	.037	±.007	- .011	±.002

There appears to be no sensible variation, in the different parts of the scale of magnitude included, for the stars south of the zenith.

The stars north of the zenith are between 37° and 56° declination, with a mean sec δ of 1.43. The groups of both sets are first combined, and the mean result gives the magnitude equation for the mean magnitude, and the rate of variation.

MAGNITUDE EQUATION: STARS NORTH OF ZENITH.

Stars.	Magnitude.	Mean.	Reduced.	Δ	Δ α	p. e.	Mag. Eq.	p. e.
					s	s	s	s
21	1.0 - 5.9	4.6	8.2	3.6	- .072	±.007	- .020	±.002
21	4.4 - 6.0	5.5	9.0	3.5	- .082	±.005	- .023	±.002
42	Mean,	5.1	8.6	3.5	- .077	±.005	- .022	±.002
24	6.0 - 6.5	6.3	9.5	3.2	- .086	±.009	- .027	±.003
25	6.1 - 6.5	6.3	9.6	3.3	- .098	±.007	- .030	±.002
49	Mean,	6.3	9.5	3.2	- .092	±.007	- .029	±.002
91	Both	5.7	9.1	3.4	- .085	±.004	- .025	±.001

RATE OF VARIATION IN MAGNITUDE EQUATION NORTH STARS.

Mean Magnitude, 6.8 - 7.9 = 7.4. Mag. Eq., - $\overset{s}{.025}$. Rate, - $\overset{s}{.006}$.

The following tabulation gives the magnitude equations, and the corresponding corrections:

SOUTH STARS.			NORTH STARS.				
Mag.	Eq.	Corr.	Uniform Eq.	Rate.	Uniform Corr.	Rate.	Δ
	s	s	s	s	s	s	s
5.0	- .008	.000	- .025	- .011	+ .010	.000	+ .010
6.0	- .008	- .008	- .025	- .017	- .015	- .014	- .001
7.0	- .008	- .016	- .025	- .023	- .040	- .034	- .006
8.0	- .008	- .024	- .025	- .029	- .065	- .060	- .005
9.0	- .008	- .032	- .025	- .035	- .090	- .092	+ .002

Since the corrections for magnitude equation are differential, any origin may be adopted, or one series of corrections may be changed by the addition of a constant.

Following the detailed comparison with the Cape catalogue, in a later section, the relative magnitude equation of the two catalogues is derived. Assuming that the Cape Right Ascensions have been corrected precisely for the effect, there would remain a magnitude equation, for Lick, of $-0^s.012$. While this confirms the general effect of the magnitude correction for this series, the value is larger than that derived from direct measures here. The Cape Right Ascensions would appear to be overcorrected.

The application of the relative magnitude equation, to the Lick Right Ascensions, would reduce the average residual of the difference between the two catalogues, from $\pm 0^s.029$ to $\pm 0^s.026$, corresponding to an average improvement in the Lick results of $\pm 0^s.012$.

The Refraction. The Poulkova refractions have been used in the reduction of the Declinations of the zodiacal list. Since the reduction is of a differential nature, based upon Newcomb's Declinations within the same zone, no large errors are likely to be introduced by the employment of a refraction constant that may not conform strictly to the atmospheric conditions here. The effect of the corrections to the refraction constant will be discussed later.

The work of the last few years has indicated, in general, a lack of agreement between the measured zenith distances, reduced with the Poulkova constant, and the most recent standard systems of Declination. This subject has been discussed, with considerable detail, in Volume VI of our Publications, pages 150–155, in connection with the observations of the Piazzi stars of high Southern Declination. The correction to the Poulkova refractions is there derived by two methods: First, the observations of circumpolar stars are combined with stars south of the zenith. This gives a long arc, including the entire range of the observed zenith distances, approximately 150° in extent. Taking, moreover, the zenith distance of the pole as one end of the arc, this point may be considered as nearly free from the influence of errors in the assumed Declinations, since it is determined by the combination of observations of upper and lower culminations. The determination of the zenith distance of the pole is not entirely free from the influence of such errors, because the effect of refraction is greater upon stars at lower culmination, and the corresponding correction to the assumed refraction is greater. The half of the correction to the measured arc is very nearly the absolute correction to the assumed refraction, for nearly equal arcs, each side of the zenith. The measurement of the southern end of the arc is affected by the errors in the Declinations of the corresponding stars, and this error is included in the determination of the correction for the whole arc.

The second method treats the observed corrections to the Declinations of the southern stars of several systems, in a series of zones, through the whole extent observed. This treatment gives a correction, independent of the systematic error of the Declinations involved, taken as a whole. But systematic errors between the Declination zones are necessarily reproduced.

The correction to the refraction may also be derived, from the two culminations of the circumpolar stars, alone. This method is differential, and the latitude variation and the error of Nadir reading both enter as disturbing factors. The material is hardly extensive enough to guarantee the practical elimination of the uncertainty arising from these sources.

The first year of the fundamental work has been designed to furnish as much evidence as possible upon this point. Six circumpolar stars are included in each program, four of them being at greater zenith distance, at lower culmination, than is ordinarily observed here, and successive culminations were regularly obtained, when possible. The usual limit for Circumpolars is 70° Declination, giving zenith distance of 72° at lower culmination. In the fundamental work, circumpolar observations of stars at 60° Declination are included.

The observations of these Circumpolars, treated separately, and also combined with those of stars at the zenith, and of stars at large zenith distances south, will, it is expected, give a strong determination of the correction to the refraction constant.

While the Poulkova constant is smaller than that of Bessel, (now generally recognized as being too large,) the conditions at Mount Hamilton appear to require a further decrease in the constant. The amount of this correction, derived in Volume VI, is of the form $-0''.20$ tan Z. D. down to $-40°$ Declination, or zenith distance 77°. At the average atmospheric pressure and temperature of observing nights here, this corresponds to a decrease in the Poulkova constant of $0.004\,\mu$.

Corrections based upon this value have been applied to the reductions in Declination of the uncatalogued Piazzi stars, since that series of observations may be considered as a continuation of the Piazzi catalogue contained in Volume VI, and the table of corrections will be found in the corresponding section of this volume. It remains to consider the evidence of the observations in the present series. As will be shown in detail in the tabulation of results, the discussion of Newcomb's Declinations within the zone of the zodiac, zenith distance 8° to 68°, gives a correction to the Poulkova constant of $-0.008\,\mu$. This value is differential only, for the extent of arc involved.

If the circumpolar observations are combined with those of the Fundamental stars south of the zenith, the resulting correction would be, $-0.005\,\mu$.

The observations of twenty-six circumpolar stars that were taken at both culminations, treated alone, give a contrary correction of $+0.004\,\mu$. This is a differential measure, over a small arc, and the use of the computed increase in the refractions would introduce an abnormal error, in the fundamental Declinations in the zodiac, of more than 1″.

Auwers' corrected places for the circumpolar stars have been adopted for the reduction of the observations in this volume.

For the observations of the set of Latitude stars, there is only the comparison of the observations of twelve circumpolar stars, none of them observed at both culminations, with the Newcomb Fundamental stars at the zenith. The results of observations, however, made in both positions of the instrument, have higher weight individually. The comparison gives the correction $-0.004\,\mu$; and the circumpolar results at both culminations were already in accord.

For the Piazzi list, the correction $-0.004\,\mu$ has already been applied. The fundamental system adopted is that of Auwers' revised 303. The difference between the observations of the Fundamental stars, and those of nineteen Circumpolars, of which only five had been observed at both culminations, is 0″.48; while, without the use of the correction to the refractions, the corresponding difference would be more than 1″. The residual difference indicates a still further decrease in the Poulkova constant, as required by this series. The observations of circumpolar stars, alone, give a correction of contrary sign, but of very small weight in this case.

The results of the use of the Poulkova refractions, and of the adoption of the computed corrections to the constant, can be summarized for comparison. The computed mean corrections to the respective fundamental systems would be derived directly from the circumpolar observations. The mean correction to the circumpolar stars would be derived from the combination of upper and lower culminations alone.

SYSTEMATIC CORRECTIONS DUE TO REFRACTION.

	Fundamental.	Circumpolar.
ZODIACAL LIST.	″	″
Poulkova Refractions	−0.62	+0.16
Correction $-0.005\,\mu$	.00	+ .35
Correction $-0.004\,\mu$	− .15	+ .31
Correction $+0.004\,\mu$	−1.08	.00
LATITUDE LIST.		
Poulkova Refractions	−0.32	0.00
Correction $-0.004\,\mu$	.00	+ .17
PIAZZI STARS.		
Poulkova Refractions	−1.03	+0.09
Correction $-0.004\,\mu$	− .48	+ .22
Correction $-0.0076\,\mu$	.00	+ .34
Correction $+0.003\,\mu$	−1.44	.00

The results above may be taken to confirm the decrease in the Poulkova constant, derived in Volume VI. In that discussion, also, the comparison of the circumpolar observations, at both culminations, indicated a correction of the contrary sign. The results are not to be considered as definitive corrections to the respective systems. They represent merely the adjustment of observed zenith distances between the pole and the mean declination of the fundamental system under discussion, by means of a correction to the refraction constant.

The differential effect upon the Declinations of the Zodiacal list remains to be considered. The mean Declination of the Fundamental stars, in a three-hour program, will fall near the mean of the Declinations in the middle hour. The range of Declination of the Zodiacal stars is from 13° to 22° per hour, with an average of 17°. The average distance between the limits of one hour, and the mean of the next hour, is 8°. The greatest distance is less than 20°, near the Equator, and the differential correction, corresponding to the decrease in the Poulkova constant of .004 μ, is 0''.15. At the highest southern Declination the greatest differential correction of this nature is 0''.10. These are the extreme cases. In general, for a three-hour program, the maximum effect of the differential correction would not exceed 0''.05. Of course, for the great majority of the stars, the effect is within the last value.

The effect of bisection error in zenith distance would be analogous to a correction to the refraction, but would probably be constant at different altitudes. This effect has been repeatedly investigated, by observations of stars at the zenith in both positions of the observer, and has been found to be very small. The earlier values (mean 0''.06) are collected on page 64, Volume VI. The fundamental observations, now in progress, have included further determinations, not yet reduced.

The Latitude. The determination of the Latitude will be affected by the errors of the Declination system adopted, and by the errors in the refractions employed. The former class of errors can be eliminated by observing circumpolar stars at both culminations; but the variation of latitude must be considered, as affecting the combination of the results. Through a long period the latitude variation is nearly balanced in effect. This will be evident, for the present case, in the table of individual values at the end of this volume. The mean of the corrections for the variation is only 0''.02, for the period of three years.

By taking the half sum of the observed latitudes, from circumpolar stars, and from the Fundamental stars, one half the systematic error of the latter will remain; and the errors of refraction will be nearly balanced, on the opposite sides of the zenith.

In the combinations which follow, the circumpolar observations have been combined at upper and lower culminations separately, and all the stars have been included. The error of the refraction is assumed to be proportional to the half sum of the tangents of mean zenith distance, at the two culminations. For stars south of the zenith, the error of the refraction is assumed to be proportional to the tangent of the zenith distance of the mean of the Declinations.

The combination of the observations of all the Newcomb Fundamental stars, in the zodiac, gives the latitude, 37° 20′ 26''.06, with the Poulkova refractions.

The circumpolar observations give φ 25″.46; mean, 25″.76. Adopting the correction to the Poulkova constant, — 0.004 μ, the respective values are: 25″.87 and 25″.77; mean, 25″.82.

The observations of the Piazzi stars have been already corrected for the above adjusted value of the refraction constant; and as the mean of the declination system has very closely the same zenith distance as the pole, the mean result is very slightly affected by the refractions employed. This series gives φ 25″.69 for the circumpolar stars, and 26″.17 for the Fundamental stars, Auwers' corrected 303 system; the mean being 25″.93. With the Poulkova refractions, the mean φ would be 25″.91.

The observations of the set of Latitude stars, for Professor Doolittle, give a value of φ near the zenith, the error of which will be mainly due to the systematic error of the Newcomb Declinations. This φ is 26″.09, and the corresponding φ from circumpolar stars is 25″.77; mean, 25″.93. Correcting the circumpolar observations for the assumed error in the refractions, the half sum of the two sets of stars is 26″.08.

Adopting the latitude 37° 20′ 25″.9, the outstanding systematic *errors* of the Fundamental stars would be as follows:

Newcomb stars at the equator, + 0″.16
Newcomb stars at the zenith, + 0 .19
Auwers' 303 stars at —15° Decl., + 0 .53

By applying the correction to the Poulkova constant, the above systematic errors become:

Newcomb stars at the equator, — 0″.03
Newcomb stars at the zenith, + 0 .19
Auwers' 303 stars at —15° Decl., + 0 .27

The values of the Latitude previously adopted, from the Meridian Circle observations, are:

Vol. IV (1894), 37° 20′ 25″.6. B. J. system.
Vol. VI (1899), 25 .7. Corrected 303 system.

Flexure. The observations of Declination in this volume would be very slightly affected by corrections for flexure, and but a few measures were made during the period included. For the succeeding fundamental work, the flexure has been regularly measured, and the results of the period up to the end of 1906 have been included below. These later measures are about evenly distributed between the two positions of the instrument, and both circles were read at each measure. As usual, the results for the two positions have been found to be nearly identical. The signs of the determinations of flexure, tabulated in the two preceding volumes, have been changed here, to correspond with corrections to the observed zenith distances. The values of the Declination micrometer are also included.

SEMI-HORIZONTAL FLEXURE.

Vol. IV	26 measures, f =	$-0''.067$	Microm., $48''.09$
Vol. VI	28 "	+ .045	" 48.12
Vol. X	4 "	+ .04	" 48.02
1905–1906 . . .	40 "	+ .056	" 48.12
Sum	98		
Mean		+0.020	48.108
Probable error .		±0.013	± .005

The flexure of this instrument is undoubtedly very small. There is some indication, above, of a change in its character.

The effect of flexure is directly measured in terms of a correction to the circle readings. The circles, when on the west side, give increasing readings as the instrument is turned from north through the zenith to south. They are graduated in the contrary direction to the clock face. The formula used for the determination of the flexure *error* has been:

$$\text{Circle West } \frac{S-N}{2}, \qquad \text{Circle East } \frac{N-S}{2},$$

where N and S are the circle readings on the north and south collimators, when these have been adjusted in coincidence. Taken as a continuous series, the probable error of a measure of the semi-horizontal flexure, f, is $\pm 0''.13$. If the measures are divided into groups, the probable error of individual measures would be somewhat smaller. The application of the correction for flexure is as follows:

Circle West, $+f$ sine Z. D., South of zenith.
$-f$ " " North " "
Circle East, $-f$ " " South " "
$+f$ " " North " "

The general effect of the plus flexure correction is to increase observed zenith distances. It acts in the same sense as the refraction correction; varying with the sine of the zenith distance, in place of the tangent. It is obvious that the plus correction for flexure, in this case, tends to augment the computed correction to the Poulkova refractions, by a very small amount. Applying the flexure correction, the sum of the observed zenith distances between the equator and the pole would be increased by $1.4\, f$. The application of the mean value of the flexure, $+ 0''.02$, would correspond to an increase in the Poulkova constant of less than $0.0003\, \mu$.

Probable Errors. From the comparison of the observations in several hours of Right Ascension, the probable errors have been computed. Six hundred residuals were employed, and the following values were derived:

Probable error of one observation, R. A. $\pm 0^s.019 \sec \delta$
Decl. $\pm 0''.23$

For the mean of two observations, there follows:

$$\text{R. A.} \pm 0^{s}.013 \sec \delta = \pm 0''.20$$
$$\text{Decl.} \pm 0''.16$$

Assuming the probable error of graduation to be $\pm 0''.15$, the resulting probable error of a Declination of the catalogue would be $\pm 0''.22$.

The probable errors of observation for the mean of four, in the series for the determination of the additional Fundamental stars, were found to be: R. A. $\pm 0^{s}.010$, and Decl. $\pm 0''.10$. The last does not include the effect of graduation error. These probable errors are for observations made at the mean zenith distance 37°, the range being from 7° to 67°.

Independent confirmation of the last values is found in the comparison of the observed corrections to the same Fundamental stars, from two separate sets of determinations, of four and five each. The probable errors of either set were found to be: R. A. $\pm 0^{s}.011$ and Decl. $\pm 0''.12$.

The comparison of the observations in different lists has been also used for the computation of probable error. The results are given in detail in the corresponding sections, later on. From the comparison with the heliometer lists of 1898 and 1900, the probable errors of this catalogue are found to be: R. A. $\pm 0^{s}.015$ and Decl. $\pm 0''.16$.

The comparison with the places of the Southern stars of Piazzi, in Volume VI, gives the probable errors: R. A. $\pm 0^{s}.017$, Decl. $\pm 0''.21$, for the Zodiacal catalogue. These last two comparisons do not include the effects of magnitude equation, and of graduation error, in the values for the Right Ascension and Declination, respectively.

Probable errors may also be derived by comparison with other catalogues. The places of this catalogue have been compared with the Washington zodiacal catalogue, and with the Cape catalogue for 1900. The results for Lick are: R. A. $\pm 0^{s}.021$, Decl. $\pm 0''.21$. The probable error of Declination includes the effect of graduation error. The Right Ascensions of the Cape catalogue have been corrected for magnitude equation. If the relative values of this correction be applied to the Lick Right Ascensions, the resulting probable error of Lick would be $\pm 0^{s}.018$.

In general, it will be expected that the probable errors derived from independent sources will be larger than those from the comparison of individual observations. This is probably due to the existence of certain forms of constant error, in the separate results, which affect them all in the same manner. But the preceding results are in fair accord, for the precision of the catalogue places, which may be predicted to have probable errors not much exceeding $\pm 0^{s}.02$ and $\pm 0''.2$.

In this connection, the probable errors of Newcomb's catalogue, for the Fundamental stars of the Zodiacal list, were found to be $\pm 0^{s}.011$ and $\pm 0''.11$, in Right Ascension and Declination, respectively.

For the extra Piazzi stars, the probable error of one observation is $\pm 0^s.023 \sec \delta$, in Right Ascension, with but little variation down to — 44° Declination. The probable error of one observation, in Declination, increases with large zenith distances. Down to — 20° Declination, the value is $\pm 0''.22$; while for the group of stars between — 30° and — 40°, the corresponding value is $\pm 0''.38$.

In the observations of the Latitude stars, the two positions of the instrument have been compared. Without making allowance for the small difference (E — W) in the results, which is probably due to accidental error, the probable errors of a single observation at the zenith were found to be: R. A. $\pm 0^s.020$, Decl. $\pm 0''.22$. For the mean of four observations, two in each position, the probable errors are: R. A. $\pm 0^s.012 = \pm 0^s.010 \sec \delta$; Decl. $\pm 0''.17$, the probable error due to graduation being included in the last.

The Fundamental List. The original list of Zodiacal stars included the enumeration of the stars to be used as standards, those of them which occur in Newcomb's catalogue being specially designated. Eight additional stars, among the standards, were found to be contained in Newcomb; and, further, eighteen of the other stars, not noted as standards, were also in the same fundamental catalogue. For the convenience of other observers, it appears desirable to complete the enumeration of the additional Newcomb stars, in the original list: No. 880, 947, 1103, 1127, 1145, 1216, 1361, 1569, 1718, 1809, 1850, 1875, 2009, 2149, 2157, 2253, 2316, 2323, 2333, 2370, 2406, 2484, 2509, 2686, 2773, 2794.

With the addition of four stars, employed as fundamental in the heliometer lists, which form part of this catalogue, there are in all 228 Fundamental stars. Of these, 161 are contained in Newcomb's catalogue.

For the remaining 67 stars no standard places have yet been derived. These stars have been specially observed here, with the use of the Newcomb stars of the zodiacal list as fundamental. A few proper motions, from Porter, or Bossert, have been included in the reductions to 1900.

In the full list, the proper motions from Newcomb are included. The Precessions for all the Fundamental stars will be given in the full catalogue of observed places.

The observed corrections to the adopted standard places are tabulated in the list. The proper motions of the list have been used in deriving these corrections. The original determinations are given in the catalogue of observed places, without the use of proper motion, for the individual stars.

The latitude, derived from the observations of each Fundamental star, is included in the list below.

The stars for which the places have been obtained from Newcomb's catalogue are designated by the letter N., in the list following; while those determined by observations made here are designated by the letters L. O.

The list does not include the observed corrections to the Newcomb places, which were derived during the special series for the determination of the L. O. fundamental places. They have been incorporated in a special list, following this, and may be considered as of greater intrinsic weight.

ADOPTED PLACES OF THE FUNDAMENTAL STARS: OBSERVED CORRECTIONS.

Star.	Cat.	R. A. 1900.0.	P. M.	Decl. 1900.0.	P. M.	Obs. φ.	No.	Obs. Correc.	
		h m s	s	° ′ ″	″	″		s	″
4 Ceti	L. O.	0 2 36.773	. . .	− 3 6 19.87	. . .	25.70	6	−.030	+0.16
d Pisc.	N.	0 15 27.111	+.0003	+ 7 38 5.62	+0.016	25.77	6	−.034	+0.10
44 Pisc.	N.	0 20 16.576	−.0014	+ 1 23 9.19	−0.023	25.67	4	+.001	+0.33
12 Ceti	N.	0 24 56.140	+.0011	− 4 30 35.34	0.000	25.96	6	+.026	−0.02
δ Pisc.	N.	0 43 29.608	+.0054	+ 7 2 27.19	−0.044	25.99	4	+.007	−0.10
20 Ceti	N.	0 47 53.788	−.0005	− 1 41 13.65	−0.003	26.67	4	+.052	−0.69
ε Pisc.	N.	0 57 45.149	−.0054	+ 7 21 6.45	+0.026	25.77	6	−.007	+0.25
26 Ceti	L. O.	0 58 40.191	+.0073	+ 0 49 51.05	−0.032	25.78	2	+.040	+0.15
72 Pisc.	N.	0 59 48.554	−.0001	+14 24 29.90	+0.054	25.81	2	−.013	−0.05
ζ 1 Pisc.	N.	1 8 30.365	+.0095	+ 7 2 47.77	−0.052	25.62	10	−.033	+0.34
f Pisc.	N.	1 12 38.422	−.0033	+ 3 5 16.48	−0.025	25.69	4	−.014	+0.30
η Pisc.	N.	1 26 7.852	+.0015	+14 49 49.36	−0.003	26.23	4	+.013	−0.43
π Pisc.	N.	1 31 47.763	−.0049	+11 37 48.21	+0.034	26.08	4	−.014	−0.11
ν Pisc.	N.	1 36 13.592	−.0015	+ 4 58 53.98	+0.003	25.58	4	−.016	+0.14
ο Pisc.	N.	1 40 6.724	+.0049	+ 8 39 16.19	+0.045	25.62	4	−.018	+0.19
54 Ceti	L. O.	1 45 33.509	. . .	+10 32 53.39	. . .	26.12	4	+.006	−0.04
ι Arietis	L. O.	1 51 53.137	. . .	+17 19 46.01	. . .	25.76	13	+.023	+0.08
ξ 1 Ceti	N.	2 7 41.915	−.0012	+ 8 22 39.48	−0.016	26.27	2	−.026	−0.17
θ Arietis	N.	2 12 33.708	−.0007	+19 26 19.12	−0.003	25.74	6	−.015	+0.11
ξ 2 Ceti	N.	2 22 50.461	+.0025	+ 8 0 42.99	−0.007	25.69	4	+.014	+0.09
ν Arietis	N.	2 33 8.195	+.0001	+21 31 44.60	−0.021	25.70	4	−.046	+0.33
μ Ceti	N.	2 39 32.098	+.0188	+ 9 41 31.45	−0.025	26.34	2	+.039	−0.33
σ Arietis	N.	2 45 58.208	+.0016	+14 40 12.09	−0.034	26.04	6	+.001	−0.10
ε Arietis	N.	2 53 29.524	−.0009	+20 56 25.62	−0.010	25.69	2	+.023	−0.01
Lal. 5724	L. O.	3 0 54.218	. . .	+12 48 5.19	. . .	25.94	9	+.008	−0.04
δ Arietis	N.	3 5 54.563	+.0110	+19 20 55.02	+0.001	25.98	7	−.016	−0.10
τ 1 Arietis	N.	3 15 27.139	+.0023	+20 47 11.91	−0.033	25.69	7	−.013	+0.18
f Tauri	N.	3 25 21.065	+.0016	+12 35 38.72	+0.002	26.43	8	+.010	−0.49
P III 103	L. O.	3 33 46.359	. . .	+16 12 40.96	. . .	25.90	2	+.005	+0.16
13 Tauri	L. O.	3 36 32.828	. . .	+19 22 48.31	. . .	25.80	2	−.007	+0.03
17 Tauri	N.	3 38 56.137	+.0016	+23 47 56.38	−0.050	25.49	4	+.017	+0.20
η Tauri	N.	3 41 32.315	+.0016	+23 47 45.59	−0.050	25.74	3	−.012	+0.34
Mayer 136	L. O.	3 47 26.880	+.0101	+17 1 45.74	−0.039	25.90	5	−.030	−0.29
A Tauri	N.	3 58 46.920	+.0069	+21 48 31.63	−0.058	25.73	18	−.016	+0.10
43 Tauri	N.	4 3 20.350	+.0079	+19 20 41.33	−0.044	25.54	4	+.023	+0.53
γ Tauri	N.	4 14 6.093	+.0083	+15 23 10.48	−0.026	26.16	4	−.004	−0.32
φ Tauri	L. O.	4 14 12.130	. . .	+27 6 40.97	. . .	26.02	2	+.012	−0.05
δ Tauri	N.	4 17 10.001	+.0075	+17 18 29.05	−0.030	25.77	4	+.017	+0.08
ε Tauri	N.	4 22 46.587	+.0082	+18 57 31.41	−0.034	26.04	2	−.001	−0.21
α Tauri	N.	4 30 10.890	+.0047	+16 18 30.03	−0.189	26.27	2	+.012	−0.69
τ Tauri	N.	4 36 14.529	+.0007	+22 45 54.59	−0.019	25.53	5	−.001	+0.25
P IV 211	L. O.	4 46 32.298	. . .	+27 43 48.36	. . .	25.92	10	−.020	−0.01
ι Tauri	N.	4 57 7.077	+.0056	+21 26 49.66	−0.049	25.53	10	−.017	+0.30
108 Tauri	L. O.	5 9 26.990	. . .	+22 10 13.07	. . .	25.56	6	+.016	+0.16
η Tauri	L. O.	5 13 16.099	.0000	+21 59 35.11	−0.080	25.54	4	−.050	+0.19
β Tauri	N.	5 19 58.192	+.0025	+28 31 23.09	−0.177	25.89	4	+.015	−0.33
ο Tauri	L. O.	5 21 37.708	. . .	+21 51 5.74	. . .	25.64	6	−.008	+0.01
ζ Tauri	N.	5 31 40.082	+.0006	+21 4 53.67	−0.032	25.88	7	−.011	+0.17
130 Tauri	N.	5 41 36.364	+.0004	+17 41 30.00	−0.009	25.92	7	+.006	+0.09
139 Tauri	L. O.	5 51 47.370	. . .	+25 56 28.80	. . .	25.40	4	+.013	+0.40

Star.	Cat.	R. A. 1900.0	P. M.	Decl. 1900.0	P. M.	Obs. φ.	No.	Obs. Correc.	
		h m s	s	° ′ ″	″	″		s	″
1 Gemin.	N.	5 58 2.500	+.0002	+23 16 7.54	-0.109	25.81	9	+.008	+0.13
3 Gemin.	L. O.	6 3 39.673	. . .	+23 7 47.33	. . .	. . .	3	. . .	. . .
η Gemin.	N.	6 8 50.513	-.0038	+22 32 9.10	-0.016	26.06	2	+.018	-0.11
κ Aurig.	L. O.	6 9 0.383	-.0051	+29 32 6.03	-0.246	25.62	2	-.013	-0.03
μ Gemin.	N.	6 16 54.663	+.0047	+22 33 54.13	-0.114	26.10	4	+.001	-0.02
ν Gemin.	N.	6 23 1.534	-.0005	+20 16 31.95	-0.016	25.73	8	+.044	-0.19
γ Gemin.	N.	6 31 56.122	+.0033	+16 29 4.94	-0.048	26.15	4	-.009	-0.37
ε Gemin.	N.	6 37 46.807	-.0001	+25 13 48.95	-0.018	25.37	6	+.025	+0.16
ζ Gemin.	N.	6 58 10.711	-.0002	+20 43 1.48	-0.007	25.83	11	+.002	+0.12
51 Gemin.	N.	7 7 37.795	+.0019	+16 19 43.49	-0.042	26.69	13	-.016	-0.56
λ Gemin.	N.	7 12 20.811	-.0029	+16 43 15.06	-0.045	26.13	6	-.021	-0.27
δ Gemin.	N.	7 14 9.107	-.0010	+22 9 59.66	-0.015	26.06	11	-.013	-0.08
ι Gemin.	N.	7 19 31.010	-.0085	+27 59 48.91	-0.088	. .	2	. .	. .
f Gemin.	L. O.	7 33 42.141	. . .	+17 54 8.06	. . .	25.46	3	+.013	+0.20
κ Gemin.	N.	7 38 24.712	-.0014	+24 38 16.29	-0.060	25.57	3	+.006	+0.53
β Gemin.	N.	7 39 11.867	-.0470	+28 16 4.21	-0.056	25.74	2	-.002	-0.23
φ Gemin.	N.	7 47 22.718	-.0020	+27 1 29.18	-0.027	26.39	1	+.033	-0.61
ω 1 Cancri	N.	7 54 52.884	+.0003	+25 39 59.94	-0.004	26.16	4	+.012	-0.21
3 Cancri	L. O.	7 55 3.533	. . .	+17 34 57.87	. . .	25.84	2	-.034	+0.10
μ Cancri	N.	8 1 52.849	+.0019	+21 52 19.18	-0.084	. .	2	. .	. .
ζ Cancri	N.	8 6 28.673	+.0051	+17 56 58.21	-0.128	26.06	4	-.013	-0.27
d 1 Cancri	N.	8 17 38.339	-.0038	+18 39 12.01	-0.031	25.80	2	+.009	+0.20
η Cancri	N.	8 26 55.630	-.0025	+20 46 51.46	-0.055	25.84	2	+.018	+0.23
γ Cancri	N.	8 37 30.032	-.0071	+21 49 41.66	-0.043	25.64	4	+.037	+0.06
δ Cancri	N.	8 39 0.207	-.0008	+18 31 19.01	-0.240	26.18	2	+.016	+0.03
α Cancri	N.	8 53 1.145	+.0024	+12 14 41.66	-0.042	25.82	8	-.030	+0.18
κ Cancri	N.	9 2 19.918	-.0012	+11 4 14.59	-0.013	26.09	8	+.002	-0.14
ξ Cancri	N.	9 3 36.691	+.0011	+22 27 0.23	+0.002	26.19	2	-.054	-0.19
83 Cancri	N.	9 13 24.106	-.0076	+18 7 45.76	-0.136	25.77	5	-.047	+0.39
ξ Leonis	N.	9 26 33.408	-.0063	+11 44 33.95	-0.084	26.59	4	-.021	-0.42
P IX 135	L. O.	9 33 18.080	. . .	+20 44 55.10	. . .	25.99	3	+.027	+0.09
ο Leonis	N.	9 35 48.875	-.0096	+10 20 50.75	-0.033	26.84	3	.000	-0.63
ψ Leonis	N.	9 38 17.217	-.0002	+14 28 45.02	-0.009	25.76	2	+.012	+0.24
23 Leonis	L. O.	9 45 37.392	. . .	+13 32 1.61	. . .	25.72	4	-.001	+0.09
ν Leonis	N.	9 52 50.622	-.0028	+12 55 18.44	-0.027	25.71	6	+.048	+0.39
π Leonis	N.	9 54 55.783	-.0029	+ 8 31 26.78	-0.027	25.87	6	+.009	+0.20
η Leonis	N	10 1 52.846	-.0022	+17 15 1.47	-0.004	25.86	2	+.056	+0.01
α Leonis	N.	10 3 2.841	-.0169	+12 27 21.72	-0.002	25.92	8	-.002	+0.04
19 Sextant.	L. O.	10 7 36.121	. . .	+ 5 6 32.17	. . .	25.49	6	+.017	+0.35
42 Leonis	L. O.	10 16 27.689	. . .	+15 28 47.52	. . .	. .	2	. .	. .
ρ Leonis	N.	10 27 32.803	-.0004	+ 9 49 16.68	-0.003	26.50	2	-.032	-0.29
50 Leonis	L. O.	10 33 32.805	. . .	+16 38 52.76	. . .	26.11	8	+.001	-0.07
34 Sextant.	N.	10 37 27.697	-.0059	+ 4 6 20.68	+0.028	26.40	2	+.012	-0.27
37 Sextant.	N.	10 40 53.315	-.0010	+ 6 54 0.82	-0.040	25.54	2	+.012	+0.35
l Leonis	N.	10 44 0.118	+.0001	+11 4 27.66	-0.033	26.10	6	-.032	0.00
d Leonis	N.	10 55 23.790	+.0004	+ 4 9 15.98	-0.022	25.70	5	+.057	+0.42
χ Leonis	N.	10 59 51.565	-.0234	+ 7 52 36.36	-0.041	26.38	10	+.001	-0.25
p 5 Leonis	L. O	11 8 38.434	. . .	+ 0 28 28.82	. . .	26.09	4	-.006	-0.04
θ Leonis	N.	11 8 59.591	-.0049	+15 58 34.28	-0.085	25.93	4	+.004	+0.04
σ Leonis	N.	11 15 58.841	-.0062	+ 6 34 38.95	-0.013	26.37	4	-.007	-0.24
ι Leonis	N.	11 18 42.698	+.0103	+11 4 48.47	-0.083	26.41	2	-.014	-0.21
τ Leonis	N.	11 22 47.696	+.0008	+ 3 24 25.36	-0.016	25.47	2	-.001	+0.43
υ Leonis	N.	11 31 49.725	.0000	- 0 16 17.71	+0.039	26.27	4	+.022	-0.12
ν Virg.	N.	11 40 43.197	-.0014	+ 7 5 23.32	-0.186	25.81	2	-.018	+0.35
β Virg.	N.	11 45 29.183	+.0494	+ 2 19 41.97	-0.274	26.20	8	+.013	-0.10
b Virg.	N.	11 54 49.629	-.0008	+ 4 12 44.07	-0.011	25.99	8	-.031	+0.16
π Virg.	N.	11 55 44.916	-.0009	+ 7 10 19.00	-0.032	26.42	4	-.032	-0.17
10 Virg.	L. O.	12 4 33.883	+.0015	+ 2 27 34.24	-0.173	26.44	11	-.015	-0.22
Mayer 518	L. O.	12 9 8.032	-.0083	- 5 9 49.10	+0.136	26.51	4	+.033	-0.49
η Virg.	N.	12 14 47.392	-.0036	- 0 6 39.81	-0.027	26.29	6	-.002	-0.14

Star.	Cat.	R. A. 1900.0.	P. M.	Decl. 1900.0.	P. M.	Obs. φ.	No.	Obs. Correc.	
		h m s	s	° ′ ″	″	″		s	″
c Virg.	L. O.	12 15 16.250	-.0205	+ 3 52 10.19	-0.070	26.00	4	+.022	+0.20
Mayer 525	L. O.	12 22 43.686	. . .	- 4 3 43.07	. . .	26.07	4	-.031	+0.25
f Virg.	N.	12 31 38.279	-.0021	- 5 16 50.64	-0.027	26.27	4	-.012	-0.02
35 Virg.	N.	12 42 45.909	-.0004	+ 4 7 7.68	-0.011	26.37	2	-.016	-0.26
ψ Virg.	N.	12 49 9.101	-.0023	- 8 59 45.11	-0.028	26.14	6	-.023	+0.14
δ Virg.	N.	12 50 33.958	-.0318	+ 3 56 27.20	-0.060	25.78	6	+.012	+0.36
48 Virg.	N.	12 58 45.231	-.0033	- 3 7 30.25	-0.028	26.69	6	+.011	-0.54
θ Virg.	N.	13 4 46.289	-.0029	- 5 0 18.50	-0.040	26.00	14	+.008	+0.23
Lal. 24660	L. O.	13 12 22.639	. . .	- 0 8 55.00	. . .	26.19	4	+.017	+0.15
Mayer 553	L. O.	13 16 50.967	. . .	-12 3 20.88	. . .	26.27	6	+.013	0.00
α Virg.	N.	13 19 55.433	-.0028	-10 38 21.60	-0.032	26.23	2	+.016	-0.12
80 Virg.	L. O.	13 30 19.090	. . .	- 4 53 12.24	. . .	26.43	8	+.014	-0.06
m Virg.	N.	13 36 21.744	-.0073	- 8 11 54.28	+0.032	26.16	4	+.015	+0.17
89 Virg.	N.	13 44 26.186	-.0077	-17 38 9.72	-0.040	26.38	2	+.042	-0.18
P XIII 256	L. O.	13 53 5.058	+.0108	-11 34 4.01	-0.168	26.25	6	+.012	-0.01
94 Virg.	N.	14 0 59.977	-.0010	- 8 24 52.08	+0.009	26.35	10	+.027	-0.04
κ Virg.	N.	14 7 33.623	+.0006	- 9 48 29.84	+0.132	26.06	6	-.004	+0.16
λ Virg.	N.	14 13 41.834	-.0024	-12 54 39.01	+0.021	26.14	2	+.037	-0.42
2 Librae	N.	14 18 2.690	-.0014	-11 15 26.34	-0.066	25.94	6	-.004	+0.10
Mayer 591	L. O.	14 29 12.959	. . .	-20 0 1.77	. . .	26.48	8	-.013	-0.26
5 Librae	L. O.	14 40 26.859	. . .	-15 2 17.28	. . .	26.11	6	-.040	+0.10
α Librae	N.	14 45 20.691	-.0078	-15 37 34.49	-0.076	26.59	4	-.014	-0.23
ξ 2 Librae	N.	14 51 20.437	-.0006	-11 0 22.07	-0.001	26.25	4	+.054	0.00
γ Scorpii	N.	14 58 12.953	.0056	-24 53 20.06	-0.048	. . .	2	. . .	. . .
ι Librae	N.	15 6 31.171	-.0031	-19 24 48.18	-0.053	25.75	4	+.003	+0.24
ο 2 Librae	N.	15 17 27.054	-.0005	-14 46 37.77	+0.003	25.78	6	-.017	+0.49
32 Librae	N.	15 22 36.932	+.0006	-16 22 4.45	-0.043	25.86	8	+.007	+0.35
Mayer 622	L. O.	15 26 51.908	. . .	-19 19 47.77	. . .	25.61	2	+.021	+0.49
γ Librae	N.	15 29 55.881	+.0047	-14 27 21.44	+0.006	26.11	4	-.012	+0.02
42 Librae	L. O.	15 34 22.074	. . .	-23 29 35.47	. . .	26.01	4	-.010	-0.01
η Librae	L. O.	15 38 26.764	. . .	-15 21 15.50	. . .	26.80	2	+.021	-0.30
λ Librae	N.	15 47 31.652	-.0017	-19 52 5.65	-0.046	25.50	2	+.040	+0.64
π Scorpii	N.	15 52 48.058	-.0010	-25 49 34.35	-0.048	26.35	5	+.001	-0.15
δ Scorpii	N.	15 54 25.130	-.0011	-22 20 13.71	-0.035	26.96	2	+.001	-0.45
β Scorpii	N.	15 59 37.236	-.0011	-19 31 54.28	-0.028	26.52	6	+.023	-0.34
ω 2 Scorpii	L. O.	16 1 32.349	. . .	-20 35 55.04	. . .	25.96	2	+.004	+0.14
ν Scorpii	N.	16 6 10.893	-.0017	-19 12 3.48	-0.041	. . .	2	. . .	. . .
σ Scorpii	N.	16 15 6.531	-.0011	-25 21 10.27	-0.039	26.47	11	-.008	-0.11
ψ Ophiuchi	L. O.	16 18 14.973	. . .	-19 48 12.21	. . .	25.88	6	-.014	+0.41
ρ Ophiuchi	N.	16 19 35.212	-.0015	-23 12 57.77	-0.007	26.49	6	+.015	+0.13
χ Ophiuchi	L. O.	16 21 13.581	. . .	-18 13 46.05	. . .	25.88	2	+.038	+0.04
α Scorpii	N.	16 23 16.479	-.0006	-26 12 36.39	-0.028	26.60	2	+.002	-0.30
φ Ophiuchi	L. O.	16 25 24.819	. . .	-16 23 40.89	. . .	26.10	2	+.009	+0.05
ω Ophiuchi	L. O.	16 26 12.387	. . .	-21 15 8.60	. . .	. . .	2	. . .	. . .
τ Scorpii	N.	16 29 39.355	-.0013	-28 0 30.90	-0.034	26.45	10	-.013	+0.06
Br. 2115	L. O.	16 36 0.893	. . .	-19 43 57.51	. . .	26.57	2	+.039	-0.39
15 Ophiuchi	L. O.	16 39 7.695	. . .	-22 59 51.87	. . .	25.75	5	-.010	+0.28
24 Ophiuchi	L. O.	16 50 46.061	. . .	-22 59 29.20	. . .	26.27	6	+.013	+0.18
Br. 2160	L. O.	16 58 34.330	. . .	-25 30 10.60	. . .	26.01	3	-.024	+0.30
ξ Ophiuchi	L. O.	17 15 0.581	+.0160	-21 0 19.98	-0.200	26.76	2	-.012	-0.40
θ Ophiuchi	N.	17 15 52.039	-.0006	-24 53 59.07	-0.036	26.41	4	-.020	-0.23
51 Ophiuchi	L. O.	17 25 18.805	. . .	-23 53 7.42	. . .	26.30	9	+.002	0.00
ξ Serpent	N.	17 31 51.587	-.0038	-15 20 7.95	-0.060	26.96	8	+.014	-0.56
58 Ophiuchi	L. O.	17 37 26.187	. . .	-21 38 4.20	. . .	26.62	6	+.014	-0.27
X Sagit.	L. O.	17 41 15.929	. . .	-27 47 33.78	. . .	26.14	2	-.013	-0.05
4 Sagit.	L. O.	17 53 41.155	. . .	-23 48 25.54	. . .	26.25	4	+.045	+0.06
γ Sagit.	N.	17 59 23.001	-.0056	-30 25 31.09	-0.198	27.04	4	+.018	-0.49
μ Sagit.	N.	18 7 46.965	-.0004	-21 5 6.14	-0.002	26.33	10	+.011	+0.21
δ Sagit.	N.	18 14 35.532	+.0023	-29 52 14.25	-0.034	26.63	14	-.015	-0.18
λ Sagit.	N.	18 21 47.964	-.0034	-25 28 37.40	-0.199	26.57	12	-.012	-0.05

Star.	Cat.	R. A. 1900.0.	P. M.	Decl. 1900.0.	P. M.	Obs. φ.	No.	Obs. Correc.	
		h m s	s	° ′ ″	″	″		s	″
Mayer 750	L. O.	18 25 34.717	. . .	−18 28 16.63	. . .	27.04	2	+.005	−0.17
26 Sagit.	L. O.	18 35 45.684	. . .	−23 55 35.49	. . .	26.42	10	+.020	−0.12
φ Sagit.	N.	18 39 24.531	+.0034	−27 5 36.78	−0.006	26.47	4	.000	−0.12
30 Sagit.	N.	18 44 49.795	−.0041	−22 16 35.41	−0.024	26.79	6	+.023	−0.39
σ Sagit.	N.	18 49 3.867	−.0003	−26 25 15.55	−0.075	26.68	2	+.027	−0.16
τ Sagit.	N.	19 0 41.861	−.0046	−27 48 59.80	−0.254	26.24	12	−.031	+0.10
π Sagit.	N.	19 3 49.035	−.0005	−21 10 57.40	−0.036	26.48	6	+.008	−0.15
ψ Sagit.	N.	19 9 24.557	+.0025	−25 25 44.73	−0.035	26.53	4	−.008	+0.11
d Sagit.	N.	19 11 47.065	−.0015	−19 7 51.30	−0.017	26.49	11	+.013	+0.07
h Sagit.	N.	19 30 37.345	+.0044	−25 6 15.71	−0.027	26.64	7	+.012	−0.11
f Sagit.	N.	19 40 31.760	−.0099	−20 0 5.46	−0.088	26.40	7	+.005	+0.23
ω Sagit.	L. O.	19 49 42.899	+.0138	−26 33 53.40	+0.079	26.22	8	+.006	+0.04
63 Sagit.	L. O.	19 56 22.537	. . .	−13 54 50.67	. . .	26.58	8	−.005	−0.26
c Sagit.	N.	19 56 30.611	+.0023	−27 59 16.43	+0.013	26.17	8	+.010	+0.40
ξ Capric.	L. O.	20 6 51.604	+.0117	−12 54 38.05	−0.194	26.22	3	−.020	+0.52
4 Capric.	N.	20 12 8.919	+.0012	−22 7 7.81	−0.032	26.99	11	+.031	−0.44
β Capric.	N.	20 15 23.642	+.0030	−15 5 50.01	+0.006	26.42	4	−.034	−0.03
π Capric.	N.	20 21 35.884	+.0004	−18 32 22.24	−0.002	27.18	4	−.048	−0.42
Mayer 866	L. O.	20 26 55.205	. . .	−25 16 53.65	. . .	26.11	8	−.012	+0.10
υ Capric.	N.	20 34 21.484	−.0018	−18 29 26.46	−0.007	27.08	9	−.014	−0.84
ε Aquarii	N.	20 42 15.807	+.0017	− 9 51 42.79	−0.030	. .	2	. .	. .
P XX 325	L. O.	20 45 11.102	+.0079	−12 54 55.55	−0.054	26.35	3	−.012	−0.17
19 Capric.	L. O.	20 49 8.857	. . .	−18 18 8.58	. . .	26.64	4	−.011	−0.31
η Capric.	N.	20 58 42.901	−.0025	−20 15 2.10	−0.047	. .	2	. .	. .
θ Capric.	N.	21 0 19.606	+.0050	−17 37 49.23	−0.066	25.91	14	−.014	+0.31
χ Capric.	L. O.	21 2 50.051	. . .	−21 35 43.82	. . .	26.86	2	−.028	−0.84
ν Aquarii	N.	21 4 8.846	+.0057	−11 46 35.69	−0.006	26.89	6	+.013	−0.32
ι Capric.	N.	21 16 40.787	+.0022	−17 15 37.69	+0.003	25.81	10	+.001	+0.38
18 Aquarii	L. O.	21 18 43.698	. . .	−13 18 26.16	. . .	25.92	2	−.009	+0.12
ξ Aquarii	N.	21 32 25.754	+.0075	− 8 18 9.84	−0.023	26.18	4	−.010	+0.14
γ Capric.	N.	21 34 33.099	+.0129	−17 6 50.44	−0.018	26.45	8	−.023	−0.27
κ Capric.	N.	21 37 4.511	+.0094	−19 19 19.61	−0.006	26.24	6	+.024	+0.02
δ Capric.	N.	21 41 31.344	+.0176	−16 34 52.05	−0.297	25.79	13	−.004	+0.37
μ Capric.	N.	21 47 50.687	+.0204	−14 1 21.49	0.000	. .	2	. .	. .
ι Aquarii	N.	22 1 2.227	+.0022	−14 21 17.58	−0.062	26.08	8	+.023	+0.12
θ Aquarii	N.	22 11 33.444	+.0073	− 8 16 52.46	−0.019	26.38	4	+.035	−0.36
50 Aquarii	L. O.	22 19 5.721	. . .	−14 2 10.67	. . .	25.80	8	+.012	+0.10
σ Aquarii	N.	22 25 21.370	.0000	−11 11 22.84	−0.025	26.46	5	.000	−0.25
κ Aquarii	N.	22 32 34.690	−.0049	− 4 44 37.91	−0.113	26.30	8	−.013	−0.08
67 Aquarii	L. O.	22 38 0.982	. . .	− 7 29 11.20	. . .	26.18	3	−.010	−0.24
τ Aquarii	N.	22 44 17.901	−.0008	−14 7 13.44	−0.033	26.30	2	+.002	−0.03
λ Aquarii	N.	22 47 23.880	+.0002	− 8 6 42.33	+0.035	26.09	10	+.002	+0.01
3 Piscium	L. O.	22 55 30.224	. . .	− 0 21 4.31	. . .	25.84	7	+.021	+0.17
β Piscium	N.	22 58 47.291	+.0008	+ 3 16 53.88	−0.006	25.99	4	−.035	+0.43
A Piscium	L. O.	23 3 33.609	+.0090	+ 1 35 0.36	+0.111	26.26	7	+.007	−0.13
φ Aquarii	N.	23 9 8.623	+.0015	− 6 35 17.33	−0.194	26.48	8	−.002	−0.29
ψ 1 Aquarii	N.	23 10 39.197	+.0250	− 9 37 56.95	−0.005	. .	2	. . .	. . .
γ Piscium	N.	23 11 58.873	+.0502	+ 2 44 9.13	+0.020	25.78	2	+.007	+0.32
ψ 3 Aquarii	N.	23 13 45.621	+.0027	−10 9 27.12	−0.001	25.78	3	−.010	+0.09
κ Piscium	N.	23 21 48.381	+.0056	+ 0 42 29.47	−0.093	25.70	8	+.008	+0.16
Mayer 1003	L. O.	23 30 22.589	. . .	− 8 1 4.54	. . .	26.14	3	+.023	+0.07
ι Piscium	N.	23 34 48.394	+.0246	+ 5 5 3.39	−0.436	25.11	2	+.026	+0.39
λ Piscium	N.	23 36 56.632	−.0092	+ 1 13 46.82	−0.154	26.02	7	−.014	+0.21
20 Piscium	L. O.	23 42 48.120	. . .	− 3 19 2.99	. . .	25.79	8	+.010	+0.19
25 Piscium	N.	23 47 57.448	+.0003	+ 1 32 4.69	−0.004	26.26	7	+.026	+0.07
27 Piscium	N.	23 53 33.218	−.0034	− 4 6 38.61	−0.066	26.43	11	+.019	−0.26
ω Piscium	N.	23 54 10.551	+.0102	+ 6 18 35.06	−0.108	26.03	4	−.008	−0.12
30 Piscium	N.	23 56 49.900	+.0029	− 6 34 11.33	−0.037	26.50	7	+.001	−0.18
Mean,						26.11			
Sum,							1195		
Average,						v ± 0″.31		±ˢ.017	± 0″.22
No. stars, 228 = 161 N + 67 LO No. used, 217									

Within the limits of the zodiac, the Declinations vary with the Right Ascensions, and systematic errors may be discussed with respect to either coördinate. The variation in the observed latitude, in the table above, will be represented by combining the values in single hours of Right Ascension. A least square solution of the groups, in the following table, gives the rate 0".013 per degree. If the rate depends upon the zenith distance, due to refraction corrections, it should vary with the Declination of the stars; but a close enough approximation is reached, for the extent of arc included, by using a uniform rate. The application of the corresponding corrections to the tabulated φ below, gives the column headed "Rate." The last column, Δ, is the difference between observed and adjusted φ. It is found to be one half the average residual of the observed values, in the hourly groups. Applied to individual stars, the average residual of φ is reduced from ± 0".31 to ± 0".25, corresponding closely to the application of an average correction of ± 0".18.

If the above adjustment of the observed values of the latitude is to be based entirely upon a correction to the refractions, the linear correction, between the limits of the table, is equivalent to a decrease in the refractions employed, of 0".38 tan Z. D. At the average atmospheric conditions here, during observing nights: Bar. 25.9, Temp. 54°, this decrease corresponds to a correction to the Poulkova constant of — 0.0076 μ. This determination is differential in character, extending over an arc of 47°, between the limits of the table.

The adjustment below corresponds to the latitude 37° 20′ 26".11, at the equator; with a rate of — 0".013 per degree; equivalent to a correction to the refraction constant of — 0.0076 μ.

LATITUDE RESULTS: STARS OF THE FUNDAMENTAL LIST.

R. A.	Decl.	Stars.	φ	ι	Obs.	Rate.	Δ
h	°		"	"		"	"
0.6	+ 3.3	9	25.90	-0.21	40	26.07	-0.17
1.5	+ 9.7	8	25.84	- .27	47	25.99	- .15
2.5	+14.7	7	25.92	- .19	26	25.92	.00
3.5	+18.7	10	25.86	- .25	65	25.87	- .01
4.5	+20.7	9	25.86	- .25	43	25.85	+ .01
5.5	+22.8	8	25.71	- .40	47	25.82	- .11
6.4	+22 3	7	25.84	- .27	37	25.82	+ .02
7.6	+21.8	9	26.00	- .11	45	25.83	+ .17
8.5	+18.3	6	25.89	- .22	22	25.88	+ .01
9.5	+14.4	10	26.05	- .06	43	25.93	+ .12
10.5	+ 9.5	10	26.00	- .11	51	25.99	+ .01
11.5	+ 5.8	10	26.10	- .01	42	26.04	+ .06
12.5	- 1.2	10	26.26	+ .15	53	26.13	+ .13
13.4	- 8.8	8	26.24	+ .13	46	26.22	+ .02
14.5	-13.0	8	26.24	+ .13	46	26.28	- .04
15.6	-19.2	11	26.11	.00	45	26.36	- .25
16.5	-22.4	12	26.20	+ .09	57	26.40	- .20
17.6	-23.6	8	26.56	+ .45	39	26.41	+ .15
18.5	-24.3	8	26.62	+ .51	60	26.42	+ .20
19.5	-23.0	9	26.42	+ .31	71	26.40	+ .02
20.4	-17.9	8	26.62	+ .51	46	26.34	+ .28
21.4	-15.9	9	26.23	+ .12	65	26.31	- .08
22.5	- 7.9	10	26.14	+ .03	59	26.21	- .07
23.5	- 1.5	13	26.02	- .09	77	26.13	- .11
Sum,		217			1172		
Mean,	+ 0.1	9	26.11	± 0.20	49	26.11	± 0.10

The Circumpolar Stars. The list of stars below includes all of the 48 stars which have been regularly used here for the determination of azimuth. The adopted places for 1900 are those of the B. J., with Auwers' corrections applied. The observed corrections, $\Delta\alpha$ and $\Delta\delta$, depend upon the assumed places of Newcomb's Fundamental stars, between Declinations + 30° and — 30°, the limits for the zodiac. The observations were made in the three years, June 1901 to June 1904. No attempt was made to observe the stars with any uniformity; such pairs were selected as fitted the separate programs.

The corrections derived in the progress of the observation of the Piazzi stars, reduced with the corrected refractions, will be found in a later section. Also those derived during the observation of the Latitude stars, in 1905–06.

The observed latitudes of the table, combined with the $\Delta\delta$, would reproduce the latitude derived from Newcomb's Declinations of the Fundamental stars, used at the same time.

The comparison of the latitudes, at upper and lower culminations, does not confirm the decrease in the Poulkova refractions, which is indicated in the comparison of the circumpolar observations, taken as a whole, with those south of the zenith. The same contradiction is found in the extensive material discussed in Volume VI. The source of this contradiction must lie in other forms of systematic error. The observations of latitude here given indicate a mean correction to the Declinations of the circumpolar stars of + 0″.16. By adopting the correction to the Poulkova constant — 0.004 μ, the mean correction to the Declinations is increased to + 0″.31. This correction depends upon a differential comparison, over a small arc, however, and the latitude variation enters as a disturbing element.

The difference between the mean of all the stars, observed at both culminations, and the latitude from all the observations of the Newcomb Fundamental stars in the zodiac, is 0″.57, corresponding to a decrease in the refractions employed, of 0″.25 tan Z. D., or to a correction to the refraction constant, of — 0.005 μ.

Applying this correction to the latitudes derived from the stars observed at both culminations, there follows:

φ U. C.	25″.33	Decl. 76°.	Corrected	25″.52
L. C.	25 .66		"	26 .22
Mean	25 .49		"	25 .87
Correction to Decl.	+ 0 .16			+ 0 .35

Using the correction — 0.004 μ, as derived in Volume VI, the reduced values become, respectively:

φ U. C.	25″.49
L. C.	26 .11
Mean	25 .80
Correction to Decl.	+ 0 .31

CIRCUMPOLAR STARS: OBSERVED CORRECTIONS, AND LATITUDE.

Star.	R. A. 1900.0.	Decl. 1900.0.	U. C. Δα	L. C.	No.		U. C. Δδ	L. C.	U. C. φ	L. C.
	h m s	° ′ ″	s	s			″	″	″	″
21 Cass.	0 39 2.25	74 26 29.03	+0.12	+0.10	6	10	+0.16	-0.29	25.54	25.80
43 H. Ceph. . . .	0 55 1.58	85 43 14.51	. . .	- .02	. .	4	. . .	-1.04	. . .	25.10
α Urs. Min. . . .	1 22 33.51	88 46 26.60	. . .	. . .	. .	. .	. . .	. . .	. . .	. . .
40 Cass.	1 30 30.95	72 31 49.19	+ .09	+ .09	10	12	+ .51	- .40	25.35	25.52
50 Cass.	1 54 53.17	71 56 14.65	. . .	. . .	. .	. .	. . .	. . .	. . .	. . .
36 H. Cass. . . .	2 28 30.95	72 22 51.14	+ .06	+ .03	11	8	+1.22	+ .08	24.66	26.26
47 H. Ceph. . . .	2 52 46.62	79 1 25.15	+ .11	. . .	1	. .	+ .24	. . .	25.60	. . .
48 H. Ceph. . . .	3 7 37.10	77 22 2.82	. . .	+ .10	. .	2	. . .	+ .06	. . .	26.06
5 H. Cam. . . .	3 39 47.78	71 1 27.05	+ .05	- .03	8	4	+ .56	- .54	25 19	25.56
Gr. 750	4 5 5.66	85 17 28.61	+ .10	+ .03	10	6	+ .32	-1.46	25.50	25.17
Gr. 848	4 35 22.17	75 45 33.37	+ .04	+ .10	2	4	+ .83	-1.15	24.74	25.30
19 H. Cam. . . .	5 6 4.08	79 6 59.06	+ .10	+ .07	3	4	+1.04	- .57	24.47	25.68
Gr. 966	5 26 20.94	74 58 39.69	+ .10	.00	7	6	+ .56	- .47	25.39	26.13
22 H. Cam. . . .	6 7 49.66	69 21 18.53	. . .	+ .04	. .	2	. . .	-1.41	. . .	24.81
23 H. Cam. . . .	6 29 10.22	79 40 22.14	+ .11	+ .02	6	11	+ .41	- .21	25.33	25.89
51 H. Ceph. . . .	6 53 44.28	87 12 20.27	+ .04	. . .	3	. .	+ .65	. . .	25.12	. . .
Gr. 1374	7 48 13.84	74 11 6.46	+ .04	- .01	4	2	+ .09	-1.40	25.88	24.85
Br. 1147	8 6 59.13	76 3 44.12	. . .	. . .	. .	. .	. . .	. . .	. . .	. . .
1 H. Draco. . . .	9 22 51.15	81 46 6.87	+ .05	+ .12	3	3	+ .84	- .06	25.58	25.77
d Urs. Min. . . .	9 25 38.80	70 16 12.09	. . .	- .03	. .	4	. . .	- .91	. . .	25.17
Gr. 1586	9 49 27.00	73 21 18.30	+ .07	+ .04	7	2	+ .76	+ .03	25.37	25.94
9 H. Draco. . . .	10 26 36 23	76 13 41.48	. . .	+ .01	. .	7	. . .	-1.06	. . .	25.24
λ Draco.	11 25 28.31	69 52 58.75	+ .05	+ .05	8	4	+ .57	-1.02	25.53	24.91
4 H. Draeo. . . .	12 7 31 05	78 10 18.83	+ .22	+ .09	2	8	+ .23	- .40	25.68	25.34
κ Draco.	12 29 12.98	70 20 21.84	- .01	+ .08	8	2	+ .94	- .42	25.10	25.28
Gr. 2001	13 23 35.00	72 54 38.43	+ .09	+ .09	12	10	+ .23	- .35	25.69	25.52
4 Urs. Min. . . .	14 9 13.94	78 1 2.53	+ .03	+ .03	8	5	+ .80	+ .03	25.48	25.97
β Urs. Min. . . .	14 50 59.56	74 33 50.84	+ .05	+ .06	4	1	+1.02	+ .55	25.04	26.72
γ Urs. Min. . . .	15 20 53.01	72 11 23.16	+ .10	. . .	2	. .	+1.29	. . .	24.71	. . .
ζ Urs. Min. . . .	15 47 37.28	78 6 7.86	+ .03	+ .05	14	8	+ .81	+ .31	25.64	26.04
19 Urs. Min. . .	16 13 40.19	76 7 45.76	. . .	+ .10	. .	10	. . .	- .29	. . .	25.53
A Draco.	16 28 10.55	68 59 4.07	. . .	+ .17	. .	4	. . .	- .33	. . .	25.13
ε Urs. Min. . . .	16 56 12.18	82 12 7.74	+ .10	+ .06	4	3	+ .91	-1.05	25.54	24.60
ψ Dr. Aus. . . .	17 43 42.90	72 11 52.54	. . .	+ .12	. .	6	. . .	+ .02	. . .	25.84
35 Draco. . . .	17 53 55.49	76 58 33.95	+ .01	+ .08	6	2	+ .92	- .20	25.68	25.97
δ Urs. Min. . . .	18 4 32.71	86 36 47.75	+ .13	. . .	1	. .	+ .57	. . .	25.28	. . .
χ Draco.	18 22 51.59	72 41 21.86	+ .02	+ .12	12	6	+1.29	- .56	24.85	25.15
τ Draco.	19 17 28.68	73 10 11.45	.00	+ .06	6	3	+1.17	- .84	24.96	25.20
λ Urs. Min. . . .	19 22 30.10	88 59 15.89	. . .	- .23	. .	1	. . .	- .57	. . .	25.40
ε Draco.	19 48 30.81	70 0 47.32	. . .	. . .	. .	. .	. . .	. . .	. . .	. . .
κ Ceph.	20 12 15.71	77 24 37.09	. . .	+ .05	. .	4	. . .	+ .43	. . .	26.47
73 Draco. . . .	20 32 49.83	74 36 42.87	. . .	- .03	. .	2	. . .	(+1.02)	. . .	(26.88)
76 Draco. . . .	20 49 50.53	82 9 39.97	. . .	. . .	. .	. .	. . .	. . .	. . .	. . .
Br. 2777	21 7 30.25	77 43 14.95	. . .	. . .	. .	. .	. . .	. . .	. . .	. . .
β Ceph.	21 27 22.27	70 7 17.78	+ .09	+ .08	5	4	+ .75	- .25	25.11	26.23
24 Ceph.	22 7 53.16	71 50 54.46	+ .01	. . .	8	. .	+ .82	. . .	25.44	. . .
π Ceph.	23 4 42.91	74 50 48.50	+ .08	+ .05	2	3	+1.02	- .12	25.19	25.98
γ Ceph.	23 35 14.40	77 4 27.01	+ .02	+ .08	2	4	- .36	+ .24	26.02	26.27
Sum U. C., 31 stars	. . . . .	. . . . .	. . .	. . .	185					
Sum L. C., 37 stars	. . . . .	. . . . .	. . .	. . .		181				
Total (48), 42 stars										
Mean U. C. 31 stars	. . . . .	. . . . .	+0.07 s	. . .	6		+0.68″		25.31″	
Mean L. C. 36 stars	. . . . .	. . . . .	. . .	+0.05 s		5		-0.43″		25.61″
Mean both, 26 stars	. . . . .	. . . . .	+0.07	+0.06	6	5	+0.68	-0.40	25.33	25.66

Additional Fundamental Stars. The separate observations of the additional Fundamental stars, required to complete the full list, above, and designated by L. O. therein, are given in the section following: For the observations the stars were divided into twelve programs, each covering four hours of Right Ascension, and each program overlapping two hours on the adjacent one. The places of the additional Fundamental stars thus depend upon the places of as many Newcomb stars, from the Zodiacal list, as could be included in six consecutive hours of Right Ascension. The average number of the Newcomb standard stars is above twenty, for a program. Each star has been given four determinations, in the same position of the instrument, and the Newcomb stars have received the same number of observations, as a rule.

The observations of this special series were made in the intervals of the regular program of work upon the Zodiacal list, and are included in the period July 28, 1902, to May 4, 1904. The probable errors of one observation are: $\pm 0^s.019$ and $\pm 0''.19$ in Right Ascension and Declination, respectively. Increasing the latter by the probable error of graduation, $\pm 0''.15$, the probable errors, for the mean of four observations, would be: $\pm 0^s.010$ and $\pm 0''.18$.

The observed places of this list have been compared with the A. G. zones, for Northern stars; and with the Cordoba General Catalogue for Southern stars. The proper motions, listed above, have been included in the differential comparison. The following are the mean differences, and the average residuals, for the two group of stars, Northern and Southern:

A. G. Zones, 26 stars:

R. A. $6^h.3$, Decl. $+15°.7$. Obs. — A.G.: $\Delta\alpha + 0^s.015$ $v \pm 0^s.06$, $\Delta\delta - 0''.32$ $v \pm 0''.5$.

The Declination of 139 *Tauri*, R. A. $5^h\ 51^m$, differs $4''$ from that of the Cambridge zone, which appears to be in error, and the $\Delta\delta$ has not been included in the comparison.

Cordoba General Catalogue, 41 stars:

R. A. $17^h.2$, Decl. $-16°.1$. Obs. — C.G.C.: $\Delta\alpha + 0^s.009$ $v \pm 0^s.08$, $\Delta\delta - 0''.23$ $v \pm 0''.7$.

The observed corrections to Newcomb's places, for this series of observations, are given in the table below. They have not been included in the full list of Fundamental stars, as it was considered to be desirable to discuss these results separately. They represent the accidental variations of individual stars, from the system, according to the evidence of these observations. Reference to the full list will give the observed place of the Fundamental star, in combination with these corrections. The proper motions from Newcomb have been included, in deriving the corrections.

For the list of 124 Newcomb stars, the average corrections are: $\pm 0^s.018$ and $\pm 0''.26$. The probable error of determination is evidently the same as the probable error of the mean of four observations. This can also be confirmed by the comparison of this list with the full list of Fundamental stars observed during the same period, but reduced separately.

The average differences of the observed corrections, for the stars included in both lists, are: $\Delta\alpha \pm 0^{s}.018$ and $\Delta\delta \pm 0''.20$. The full list contains an average of five observations, while this shorter list contains uniformly four. The separate programs of the latter include twenty Fundamental stars, while the ordinary program of the *Zodiacal* list includes eight, and hence the weight of the special series is greater, for individual determinations. The means of the observed corrections are nearly the same, if all the stars of the full list be included: $\pm 0^{s}.017$ and $\pm 0''.22$, as compared with the values given above. Allowing the same weight for each list, the probable errors of the observed corrections would be: $\pm 0^{s}.011$ and $\pm 0''.12$. The latter must be increased by the effect of graduation error, assumed to be $\pm 0''.15$, giving the probable error of a Declination correction, $\pm 0''.19$. These are in good agreement with the results, for the mean of four, derived from the residuals of separate observations.

The probable errors of Newcomb's places can be computed, from a comparison of these figures, and would be: $\pm 0^{s}.011$, and $\pm 0''.11$, in Right Ascension and Declination, respectively.

A check upon this estimate is found in the ordinary programs for the Zodiacal list. The probable errors of observation were found to be $\pm 0^{s}.020$ and $\pm 0''.23$ for one observation. These are larger than those of the special series, due undoubtedly to the fact that there are a smaller number of standard stars included in each program. The average residual for a determination of the clock correction, $\Delta\tau$, is $\pm 0^{s}.027$. Comparing this with the probable error of one observation, there would remain $\pm 0^{s}.011$ for the error of the adopted Right Ascension of the standard star. Similarly, in Declination, the average residual in the determination of the Equator Point is $\pm 0''.35$. Comparing this with the probable error of one observation, augmented by the probable error of graduation, there would remain $\pm 0''.12$, for the error of the adopted standard Declination. It may well be conceded that observed corrections to Newcomb's places that exceed four times the probable errors of the determination, $\pm 0^{s}.04$ and $\pm 0''.7$, respectively, may be taken to indicate real errors in the Catalogue positions, of sensible amount.

The reference to the precision of the observed places, in programs containing various numbers of standard stars, may be used to illustrate a point, often confused or entirely overlooked in deriving systematic corrections. If we should find the purely accidental error of one observation in Right Ascension to be $\pm 0^{s}.0180$, then the probable error of the clock correction, determined on one night from eight stars, would be $\pm 0^{s}.0064$; and from twenty stars the probable error of the clock correction would be $\pm 0^{s}.0040$. Accordingly, the probable error of the difference of the adopted clock corrections on two nights, with the same list of clock stars, would be $\pm 0^{s}.009$ and $\pm 0^{s}.006$, in the two cases considered, entirely due to accidental error of observation. And in comparing the full list of stars determined on two similar nights, in one half of the pairs of nights we should expect to find mean differences of $0^{s}.009$ and $0^{s}.006$, in the two cases, respectively. These differences might appear to be due to systematic errors, and similar differences are often treated as such; while in fact they are precisely what should be anticipated from errors of observation, purely accidental in character.

Taking the above probable errors of one observation, and of the mean of eight, and of twenty, by comparing the results of two similar nights, the probable errors of one determination of Right Ascension would be found to be: $\pm 0^{s}.0191$ and $\pm 0^{s}.0185$, for the two cases. This shows a slight increase in precision for the larger number of standard stars. There would also be a real gain which is not in evidence, due to the greater precision of the mean of the adopted places of the larger number of standard places. This gain is not so important, for the purpose of the observer, as the decrease in the probable error in the determination of the constants to be employed in reduction, which is assured by the use of a sufficiently large number of standard stars, and of instrumental measures.

In considering work of a fundamental character, the discussion is simplified by reducing all observations to one standard star, for the derivation of the systematic errors. But it must be evident that a large number of observations will be required, in this case, to produce high precision in individual results.

OBSERVED CORRECTIONS TO NEWCOMB'S FUNDAMENTAL STARS: SPECIAL SERIES.

Star.	R. A.	Decl.	$\Delta\alpha$	$\Delta\delta$	φ	Star.	R. A.	Decl.	$\Delta\alpha$	$\Delta\delta$	φ
	h m	° ′	s	″	″		h m	° ′	s	″	″
d Pisc. . . .	0 15	+ 7 38	−.048	−0.06	25.83	130 Tauri . .	5 41	+17 41	−.032	.00	25.52
44 Pisc. . . .	0 20	+ 1 23	+.020	+ .46	25.32	I Gemin. . .	5 58	+23 16	+.019	+ .09	25.44
12 Ceti . . .	0 24	− 4 30	−.018	+ .13	25.64	μ Gemin. . .	6 16	+22 33	+.009	+ .06	25.74
δ Pisc. . . .	0 43	+ 7 2	−.007	+ .49	25.26	ν Gemin. . .	6 23	+20 16	+.052	− .31	26.12
20 Ceti . . .	0 47	− 1 41	+.042	− .36	26.10	γ Gemin. . .	6 31	+16 29	−.013	− .37	26.19
ζ Pisc. . . .	1 8	+ 7 2	−.018	− .04	25.77	ε Gemin. . .	6 37	+25 13	+.031	+ .15	25.67
f Pisc. . . .	1 12	+ 3 5	−.004	+ .05	25.68	ζ Gemin. . .	6 58	+20 43	−.047	+ .08	26.00
η Pisc. . . .	1 26	+14 49	+.013	− .34	26.06	51 Gemin. . .	7 7	+16 19	−.041	− .40	26.29
π Pisc. . . .	1 31	+11 37	+.033	− .19	25.90	λ Gemin. . .	7 12	+16 43	−.022	+ .33	25.56
ν Pisc. . . .	1 36	+ 4 58	+.006	+ .13	25.57	δ Gemin. . .	7 14	+22 9	−.038	+ .09	25.81
o Pisc. . . .	1 40	+ 8 39	−.011	+ .13	25.57	$\varkappa$ Gemin. . .	7 38	+24 38	+.002	+ .58	25.34
ξ 1 Ceti . . .	2 7	+ 8 22	−.001	+ .76	24.89	φ Gemin. . .	7 47	+27 1	−.003	− .38	26.23
θ Arietis . .	2 12	+19 26	−.041	+ .12	25.52	ζ Cancri . .	8 6	+17 56	−.009	− .62	26.65
ξ 2 Ceti . . .	2 22	+ 8 0	+.028	− .27	25.92	d 1 Cancri . .	8 17	+18 39	+.007	+ .56	25.47
ν Arietis . .	2 33	+21 31	−.028	− .19	25.84	η Cancri . .	8 26	+20 46	+.009	+ .04	25.99
μ Ceti . . .	2 39	+ 9 41	+.023	− .94	26.58	γ Cancri . .	8 37	+21 49	−.008	+ .84	25.19
σ Arietis . .	2 45	+14 40	+.008	− .08	25.72	δ Cancri . .	8 39	+18 31	−.023	+ .09	25.94
ε Arietis . .	2 53	+20 56	−.012	+ .10	25.54	α Cancri . .	8 53	+12 14	−.004	− .03	26.01
δ Arietis . .	3 5	+19 20	+.003	− .11	25.76	$\varkappa$ Cancri . .	9 2	+11 4	+.013	+ .06	26.02
τ Arietis . .	3 15	+20 47	−.025	.00	25.60	ξ Cancri . .	9 3	+22 27	−.032	− .09	26.07
f Tauri . . .	3 25	+12 35	+.009	+ .13	25.47	83 Cancri . .	9 13	+18 7	−.044	− .10	26.13
η Tauri . . .	3 41	+23 47	+.013	+ .31	25.29	ξ Leonis . .	9 26	+11 44	+.024	− .56	26.59
A Tauri . . .	3 58	+21 48	−.018	+ .27	25.33	o Leonis . .	9 35	+10 20	+.005	− .49	26.47
43 Tauri . . .	4 3	+19 20	−.005	+ .60	24.84	π Leonis . .	9 54	+ 8 31	+.031	− .09	26.12
δ Tauri . . .	4 17	+17 18	−.012	− .12	25.57	η Leonis . .	10 1	+17 15	+.077	− .19	26.37
ε Tauri . . .	4 22	+18 57	+.002	− .33	25.79	ρ Leonis . .	10 27	+ 9 49	−.015	− .24	26.42
τ Tauri . . .	4 36	+22 45	+.012	+ .41	25.06	34 Sex. . . .	10 37	+ 4 6	−.010	− .35	26.56
ι Tauri . . .	4 57	+21 26	−.010	+ .17	25.31	37 Sex. . . .	10 40	+ 6 54	+.020	+ .35	25.83
β Tauri . . .	5 19	+28 31	+.011	− .53	26.03	l Leonis . .	10 44	+11 4	−.057	+ .40	25.78
ζ Tauri . . .	5 31	+21 4	−.017	+ .18	25.33	d Leonis . .	10 55	+ 4 9	+.010	+ .64	25.54

Star.	R. A.	Decl.	*Δα*	*Δδ*	*φ*	Star.	R. A.	Decl.	*Δα*	*Δδ*	*φ*
	h m	° ′	s	"	"		h m	° ′	s	"	"
χ Leonis . .	10 59	+ 7 52	−.018	− .09	26.27	30 Sagit. . .	18 44	−22 16	+.052	− .42	26.57
σ Leonis . .	11 15	+ 6 34	−.011	− .11	26.29	σ Sagit. . . .	18 49	−26 25	+.042	+ .49	25 67
ι Leonis . .	11 18	+11 4	+.031	+ .05	26.05	τ Sagit. . . .	19 0	−27 48	−.013	+ .21	25.94
υ Leonis . .	11 31	− 0 16	−.014	+ .24	25.94	π Sagit. . . .	19 3	−21 10	−.007	− .18	26.33
ν Virg. . . .	11 40	+ 7 5	+.010	− .16	26.34	ψ Sagit. . . .	19 9	−25 25	−.003	− .26	26.41
β Virg. . . .	11 45	+ 2 19	+.020	−0.14	26.32	d Sagit. . . .	19 11	−19 7	+.021	+ .30	25.85
π Virg. . . .	11 55	+ 7 10	+.033	+ .02	26.16	h Sagit. . . .	19 30	−25 6	−.028	− .23	26.38
f Virg. . . .	12 31	− 5 16	.000	− .19	26.74	f Sagit. . . .	19 40	−20 0	−.021	− .12	26.28
35 Virg. . . .	12 42	+ 4 7	−.032	+ .08	26.25	4 Capric. . .	20 12	−22 7	+.027	− .54	26.62
ψ Virg. . . .	12 49	− 8 59	+.005	+ .45	26.10	υ Capric. . .	20 34	−18 29	−.015	− .86	26.94
θ Virg. . . .	13 4	− 5 0	−.006	+ .08	26.47	θ Capric. . .	21 0	−17 37	−.002	+ .53	25.55
α Virg. . . .	13 19	−10 38	−.013	− .30	26.85	ι Capric. . .	21 16	−17 15	.000	+ .31	25.77
m Virg. . . .	13 36	− 8 11	+.004	+ .04	26.51	ξ Aquar. . .	21 32	− 8 18	−.019	− .30	26.38
89 Virg. . . .	13 44	−17 38	−.002	− .13	26.68	γ Capric. . .	21 34	−17 6	−.016	− .25	26.33
94 Virg. . . .	14 0	− 8 24	+.030	− .09	26.62	δ Capric. . .	21 41	−16 34	+.015	+ .30	25.78
ϰ Virg. . . .	14 7	− 9 48	−.027	− .02	26.55	ι Aquar. . .	22 1	−14 21	+.026	+ .10	25.92
λ Virg. . . .	14 13	−12 54	+.013	− .36	26.89	θ Aquar. . .	22 11	− 8 16	+.011	+ .05	25.96
2 Libr. . . .	14 18	−11 15	−.014	− .02	26.55	σ Aquar. . .	22 25	−11 11	−.013	− .21	26.21
α Libr. . . .	14 45	−15 37	−.004	− .07	26.60	ϰ Aquar. . .	22 32	− 4 44	−.014	− .14	26.13
ξ 2 Libr. . .	14 51	−11 0	+.004	+ .19	26.34	τ Aquar. . .	22 44	−14 7	−.008	− .56	26.54
ι Libr. . . .	15 6	−19 24	+.028	+ .53	26.00	λ Aquar. . .	22 47	− 8 6	−.005	+ .21	25.77
ο 2 Libr. . .	15 17	−14 46	+.003	+ .38	26.15	φ Aquar. . .	23 9	− 6 35	+.029	− .06	26.02
32 Libr. . . .	15 22	−16 22	−.006	+ .50	26.03	ψ 3 Aquar. . .	23 13	−10 9	+.005	+ .54	25.42
γ Libr. . . .	15 29	−14 27	−.029	− .39	26.92	ϰ Pisc. . . .	23 21	+ 0 42	−.031	+ .07	25.89
π Scorp. . .	15 52	−25 49	+.011	+ .04	26.49	ι Pisc. . . .	23 34	+ 5 5	−.020	+ .71	25.22
δ Scorp. . .	15 54	−22 20	+.018	− .07	26.60	λ Pisc. . . .	23 36	+ 1 13	−.004	+ .50	25.44
β Scorp. . .	15 59	−19 31	+.002	− .27	26.70	25 Pisc. . . .	23 47	+ 1 32	.000	− .27	26.07
σ Scorp. . .	16 15	−25 21	−.018	− .23	26.48	27 Pisc. . . .	23 53	− 4 6	+.046	− .30	26.19
τ Scorp. . .	16 29	−28 0	+.002	− .04	26.29	30 Pisc. . . .	23 56	− 6 34	+.027	− .47	26.26
ξ Serp. . . .	17 31	−15 20	−.010	− .20	26.44						
						Sum, 124					
γ Sagit. . . .	17 59	−30 25	+.024	− .28	26.52						
μ Sagit. . . .	18 7	−21 5	−.021	+ .52	25.63	Mean					26".01
δ Sagit. . . .	18 14	−29 52	.000	+ .19	25.96						
λ Sagit. . . .	18 21	−25 28	−.012	+ .17	25.99	Average			±ˢ.018	±0".26	
φ Sagit. . . .	18 39	−27 5	+.016	+ .05	26.11						

The observed values of the latitude are given above for each Fundamental star. The average difference between the *φ* of this list, and that of the same star in the full list, is ± 0".30. The mean of this list, 26".01, is smaller than that of the full list; and the combination of this value, with that from the circumpolar stars, would give a smaller computed decrease in the Poulkova refraction constant, and nearly in conformity with that derived in Volume VI, — 0.004 *μ*.

The latitudes of the above table can also be combined in hourly groups, to indicate the systematic variation, as was done for the full list. The result is nearly identical with the previous one, for the Fundamental stars in the zodiac. It is shown in the following table, where the computed values of the latitude are given in the eighth column. The correction corresponds to a decrease in the Poulkova constant of 0.008 *μ*, through the included arc of 49°; and the application of the rate reduces the average residual for the hourly groups, from ± 0".32 to ± 0".24. The average correction applied is ± 0".21.

COMPARISON OF OBSERVED AND COMPUTED LATITUDES: HOURLY GROUPS.

R. A.	No.	Decl.	$\Delta\alpha$	$\Delta\delta$	Obs. φ	v	Corr. φ	v
h		°	s	″	″	″	″	″
0.5	5	+ 1.9	−.002	+0.11	25.63	−0.43	25.72	−0.34
1.4	6	8.4	+.003	− .04	25.76	− .30	25.92	− .14
2.5	7	14.7	−.003	− .07	25.72	− .34	25.92	− .14
3.5	5	19.7	−.004	+ .12	25.49	− .57	25.73	− .33
4.5	5	20.0	−.003	+ .15	25.31	− .75	25.56	− .50
5.6	4	22.6	−.005	− .06	25.58	− .48	25.85	− .21
6.6	5	21.1	+.007	− .08	25.94	− .12	26.20	+ .14
7.4	5	21.3	−.020	+ .04	25.85	− .21	26.11	+ .05
8.5	6	18.3	−.005	+ .15	25.87	− .19	26.10	+ .04
9.4	6	13.7	−.001	− .21	26.23	+ .17	26.43	+ .37
10.6	7	8.7	+.001	+ .07	26.11	+ .05	26.26	+ .20
11.6	6	+ 5.7	+.011	− .02	26.18	+ .12	26.30	+ .24
12.7	3	− 3.4	−.009	+ .11	26.36	+ .30	26.39	+ .33
13.4	4	10.3	−.004	− .08	26.63	+ .57	26.56	+ .50
14.4	6	11.5	.000	− .06	26.59	+ .53	26.50	+ .44
15.6	7	22.1	+.004	+ .12	26.41	+ .35	26.10	+ .04
16.4	2	26.7	−.009	− .13	26.38	+ .32	25.93	− .13
17.8	2	22.9	+.007	− .24	26.48	+ .42	26.15	+ .09
18.5	6	25.4	+.013	+ .17	25.99	− .07	25.58	− .48
19.3	6	23.1	−.008	− .05	26.20	+ .14	25.86	− .20
20.4	2	20.3	+.006	− .70	26.78	+ .72	26.52	+ .46
21.4	5	15.4	−.004	− .12	25.96	− .10	25.80	− .26
22.4	6	10.1	.000	− .09	26.09	+ .03	26.03	− .03
23.6	8	− 2.4	+.006	+ .09	25.81	− .25	25.85	− .21
Hourly means		. .	. .	. .	26.06		26.06	
Average			. .	. .	. .	±0″.32		±0″.24

The observed places of these additional Fundamental stars have recently been compared with the Washington Zodiacal Catalogue of Hedrick, and with the Cape Catalogue for 1900. The former comparison includes 66 stars, of which the differences for one star have been omitted in the means. The latter comparison includes all of the 67 stars, and no differences have been omitted. The results of the comparisons follow:

H. — L. Average $\Delta\alpha$ $\pm 0^{s}.029$; Mean $\Delta\alpha$ $+0^{s}.018$; ν $\pm 0^{s}.025$
Average $\Delta\delta$ $\pm 0''.31$; Mean $\Delta\delta$ $+0''.15$; ν $\pm 0''.29$

C. — L. Average $\Delta\alpha$ $\pm 0^{s}.021$; Mean $\Delta\alpha$ $-0^{s}.007$; ν $\pm 0^{s}.020$
Average $\Delta\delta$ $\pm 0''.26$; Mean $\Delta\delta$ $-0''.02$; ν $\pm 0''.026$

H. — C. Average $\Delta\alpha$ $\pm 0^{s}.029$; Mean $\Delta\alpha$ $+0^{s}.025$; ν $\pm 0^{s}.021$
Average $\Delta\delta$ $\pm 0''.035$; Mean $\Delta\delta$ $+0''.17$; ν $\pm 0''.31$

In this last comparison, one difference in Right Ascension and two differences in Declination have been omitted.

From these comparisons the approximate probable errors of the respective authorities may be computed, as follows:

Cape	R. A. $\pm 0^{s}.010$;	Decl. $\pm 0''.17$
Hedrick	$\pm$ .015;	$\pm$ .21
Lick	$\pm$ .014;	$\pm$ .14

INDIVIDUAL OBSERVATIONS OF L. O. FUNDAMENTAL STARS: REDUCED TO BEGINNING OF THE YEAR.

No. 7. 4 Ceti.

1903.	h	m	s	°	′	″
Oct. 5	0	2	45.976	− 3	5	19.93
6			.985			19.38
Nov. 10			.952			19.72
25			46.037			19.88
1903.82			45.987			19.73

1903. **No. 127. 26 Ceti.**

Oct. 5	0	58	49.449	+ 0	50	49.20
6			.442			49.19
Nov. 10			.437			49.11
25			.477			48.93
1903.82			49.451			49.11

1903. **No. 233. 54 Ceti.**

Oct. 5	1	45	43.040	+10	33	47.46
6			.048			47.19
Nov. 10			.074			47.46
25			.070			46.89
1903.82			43.058			47.25

1903. **No. 246. ι Arietis.**

Oct. 5	1	52	2.941	+17	20	39.41
6			.927			39.39
Nov. 10			.952			38.92
25			.946			38.72
1903.82			2.941			39.11

1903. **No. 391. Lal. 5724.**

Nov. 10	3	1	(4.197)	+12	48	47.60
25			.061			47.96
Dec. 1			.071			47.41
7			.101			47.08
9			.094			47.58
1903.92			4.082			47.53

1903. **No. 452. P III 103.**

Nov. 25	3	33	56.567	+16	13	17.23
Dec 1			.499			16.35
7			.480			16.86
9			.504			16.62
1903.92			56.512			16.76

1903. **No. 455. 13 Tauri.**

Nov. 25	3	36	43.178	+19	23	23.32
Dec. 1			.193			23.63
7			.173			23.67
9			.209			23.46
1903.92			43.188			23.52

No. 482. Mayer 136.

1903.	h	m	s	°	′	″
Nov. 25	3	47	37.222	+17	2	18.56
Dec. 1			.175			18.70
7			.131			18.33
9			.130			18.21
1903.92			37.164			18.45

1903. **No. 535. φ Tauri.**

Dec. 1	4	14	23.173	+27	7	7.79
7			.187			7.71
1903.92			23.180			7.75
1904.						
Jan. 12			26.941			16.60
14			.811			16.62
1904.03			26.876			16.61

1903. **No. 606. P IV 211.**

Dec. 1	4	46	43.549	+27	44	7.33
7			.495			7.25
1903.92			43.522			7.29
1904.						
Jan. 12			47.244			13.54
14			.228			13.59
1904.03			47.236			13.56

1903. **No. 646. 108 Tauri.**

Dec. 1	5	9	37.807	+22	10	25.94
7			.780			26.27
1903.92			37.793			26.10
1904.						
Jan. 12			41.413			30.70
14			.415			30.66
1904.03			41.414			30.68

1903. **No. 652. η Tauri.**

Dec. 7	5	13	26.909	+21	59	46.80
1903.93						
1904.						
Jan. 12	5	13	30.501			51.46
14			.497			50.68
1904.03			30.499			51.07

1903. **No. 668. ο Tauri.**

Dec. 1	5	21	48.511	+21	51	15.69
7			.531			15.87
1903.92			48.521			15.78
1904.						
Jan. 12			52.093			18.62
14			.106			19.43
1904.03			52.100			19.02

No. 722. 139 Tauri.

1903.	h	m	s	°	′	″
Dec. 1	5	51	58.530	+25	56	30.81
7			.542			31.28
1903 92			58.536			31.04
1904.						
Jan. 12		52	2.251			31.32
14			.266			31.73
1904.03			2.258			31.52

1904. **No. 745. 3 Geminorum.**

Jan. 12	6	3	54.293	+23	7	46.44
14			.220			45.64
Mar. 1			.239			45.89
2			.227			46.08
1904.10			54.245			46.01

1904. **No. 761. κ Aurigæ.**

Jan. 12	6	9	15.738	+29	32	1.77
14			.678			1.72
Mar. 1			.707			2.09
2			.591			1.76
1904.10			15.678			1.83

1904. **No. 902. f Geminorum.**

Jan. 12	7	33	56.025	+17	53	36.09
14			.055			36.46
Mar. 2			.002			35.75
31			55.980			36.24
1904.12			56.015			36.13

1904. **No. 937. 3 Cancri.**

Jan. 12	7	55	17.319	+17	34	19.16
14			.347			19.50
Mar. 2			.288			19.48
31			.274			18.88
1904.12			17.307			19.25

1904. **No. 1094. P IX 135.**

Mar. 2	9	33	31.602	+20	43	50.61
31			.544			50.48
Apr. 9			.582			51.03
10			.589			50.97
1904.24			31.579			50.77

1904. **No. 1114. 23 Leonis.**

Mar. 2	9	45	50 404	+13	30	55.29
31			.430			54.42
Apr. 9			.369			54.89
10			.371			54.62
1904.24			50.394			54.80

No. 1115. 19 Sextantis.

1904.	h	m	s	°	′	″
Apr. 9	10	7	48.640	+ 5	5	21.05
10			.677			21.39
24			.614			21.50
29			.608			21.74
1904.30			48.635			21.42

1904. **No. 1173. 42 Leonis.**

Apr. 9	10	16	40.620	+15	27	35.54
10			.650			35.47
24			.626			35.21
29			.603			35.21
1904.30			40.625			35.36

1904. **No. 1205. 50 Leonis.**

Apr. 9	10	33	45.655	+16	37	38.11
10			.711			38.41
24			.700			38.00
29			.665			38.27
1904.30			45.683			38.20

1904. **No. 1268. p 5 Leonis.**

Apr. 9	11	8	50.702	+ 0	27	10.36
10			.778			10.46
24			.747			10.45
29			.706			11.26
1904.30			50.733			10.63

1903. **No. 1376. 10 Virg.**

June 2	12	4	43.110	+ 2	26	33.47
3			.106			33.19
1903.42			43.108			33.33
1904.						
Apr. 29			46.160			13.60
May 4			.178			13.43
1904.33			46.169			13.51

1903. **No. 1385. Mayer 518.**

June 2	12	9	17.214	− 5	10	49.19
3			.246			48.67
1903.42			17.230			48.93
1904.						
Apr. 29			20.273	− 5	11	8.58
May 4			.348			8.25
1904.33			20.310			8.41

1903. **No. 1398. c. Virg.**

June 2	12	15	25.378	+ 3	51	10.19
3			.379			9.74
1903.42			25.378			9.96
1904.						
Apr. 29			28.421		50	49.95
May 4			.434			49.79
1904.33			28.427			49.87

No. 1410. Mayer 525.

1903.	h	m	s	°	′	″
June 2	12	22	52.933	− 4	4	42.96
3			.976			42.95
1903.42			52.954			42.95
1904.						
Apr. 29			55.995		5	3.26
May 4			.985			2.37
1904.33			55.990			2.81

1903. **No. 1508. Lal. 24660**

June 2	13	12	31.848	− 0	9	52.41
3			.879			52.07
1903.42			31.863			52.24
1904.						
Apr. 29			34.978	− 0	10	10.96
May 4			.878			11.30
1904.33			34.928			11.13

1903. **No. 1516. Mayer 553.**

June 2	13	17	0.446	−12	4	18.23
3			.445			16.74
1903.42			0.445			17.48
1904.						
Apr. 29			3.653	−12	4	36.62
May 4			.655			36.92
1904.33			3.654			36.77

1903. **No 1541. 80 Virg.**

June 2	13	30	28.434	− 4	54	7.49
3			.432			7.73
1903.42			28.433			7.61
1904.						
Apr. 29			31.562			26.35
May 4			.560			26.53
1904.33			31.561			26.44

1903. **No. 1585. P XIII 256.**

June 2	13	53	14.689	−11	34	57.44
3			.718			57.55
1903.42			14.703			57.49
1904.						
Apr. 29			17.915		35	15.21
May 4			.910			15.58
1904.33			17.912			15.39

1903. **No. 1659. Mayer 591.**

June 2	14	29	23.032	−20	0	49.56
3			.070			49.71
10			.060			49.68
11			.079			49.43
1903.43			23.060			49.60

No. 1679. 5 Librae.

1903.	h	m	s	°	′	″
June 2	14	40	36.817	−15	3	3.23
3			.747			3.04
10			.763			3.49
11			.755			3.29
1903.43			36.770			3.26

1903. **No. 1770. Mayer 622.**

June 2	15	27	2.190	−19	20	25.21
3			.259			25.44
10			.268			25.09
11			.200			24.32
1903.43			2.229			25.01

1903. **No. 1785. 42 Librae.**

June 2	15	34	32.704	−23	30	11.19
3			.734			11.24
10			.680			11.34
11			.660			10.80
1903.43			32.694			11.14

1903. **No. 1796. η Librae.**

June 2	15	38	36.878	−15	21	50.30
3			.855			50.28
10			.882			50.51
11			.896			50.16
1903.43			36.878			50.31

1902. **No. 1842. ω^2 Scorpii.**

July 28	16	1	39.342	−20	36	14.29
29			.317			14.94
1902.57			39.329			14.61
1903.						
June 10			42.927			24.67
11			.901			25.26
1903.44			42.914			24.96

1902. **No. 1872. ψ Ophiuchi.**

July 28	16	18	21.993	−19	48	29.54
29			.955			29.37
1902.57			21.974			29.45
1903						
June 10			25.499	−19	48	37.89
11			.516			38.12
1903.44			25.507			38.00

1902. **No. 1878. χ Ophiuchi.**

July 28	16	21	20.501	−18	14	2.72
29			.507			2.37
1902.57			20.504			2.54
1903.						
June 10			24.051	−18	14	11.37
11			23.990			11.44
1903.44			24.020			11.40

No. 1888. φ Ophiuchi.

1902.	h	m	s	°	′	″
July 28	16	25	31.672	−16	23	56.76
29			.635			56.92
1902.57			31.653			56.84
1903.						
June 10			35.153		24	5.26
11			.139			4.97
1903.44			35.146			5.11

1902. **No. 1912. Bradley 2115.**

July 28	16	36	7.909	−19	44	12.00
29			.936			12.11
1902.57			7.922			12.05
1903.						
June 10			11.466			19.12
11			.463			18.61
1903.44			11.464			18.86

1902. **No. 1916. 15 Ophiuchi.**

July 28	16	39	14.920	−23	0	5.55
29			.901			5.77
1902.57			14.910			5.66
1903.						
June 10			18.496			12.70
1903.44						

1902. **No. 1938. 24 Ophiuchi.**

July 28	16	50	53.288	−22	59	41.56
29			.284			40.48
1902.57			53.286			41.02
1903.						
June 10			56.912	−22	59	46.94
11			.920			47.43
1903.44			56.916			47.18

1902. **No. 1954. Bradley 2160.**

July 28	16	58	41.749	−25	30	20.76
29			.668			21.23
1902.57			41.708			20.99
1903.						
June 10			45.394			26.27
11			.383			27.17
1903.44			45.388			26.72

1902. **No. 1980. ξ Ophiuchi**

July 28	17	15	7.817	−21	0	27.99
29			.782			28.23
1902.57			7.799			28.11
1903.						
June 10			11.340			32.06
11			.331			33.06
1903.44			11.336			32.56

No. 1999. 51 Ophiuchi.

1902.	h	m	s	°	′	″
July 28	17	25	26.118	−23	53	13.14
29			.121			13.13
1902.57			26.119			13.13
1903.						
June 10			29.771	−23	53	16.48
11			.785			17.08
1903.44			29.778			16.78

1902. **No. 2021. 58 Ophiuchi.**

July 28	17	37	33.394	−21	38	7.92
29			.394			7.70
1902.57			33.394			7.81
1903.						
June 10			36.991			10.59
11			.967			10.25
1903.44			36.979			10.42

1902. **No. 2027. χ Sagittarii.**

July 28	17	41	23.461	−27	47	36.81
29			.522			36.90
1902.57			23.491			36.85
1903.						
June 10			27.235			38.46
11			.243			39.24
1903.44			27.239			38.85

1902. **No. 2051. 4 Sagittarii.**

July 28	17	53	48.482	−23	48	26.82
1902.57						
1903.						
June 10			52.130			27.00
11			.148			27.17
1903.44			52.139			27.08

1902. **No. 2114. Mayer 750.**

July 28	18	25	41.727	−18	28	11.77
29			820			12.22
Aug. 4			.698			12.53
6			.751			12.09
1902.58			41.749			12.15

1902. **No. 2133 26 Sagittarii.**

July 28	18	35	53.029	−23	55	29.08
29			52.999			29.26
Aug. 4			.972			29.71
6			.999			28.95
1902.58			53.000			29.25

No. 2272. ω Sagittarii.

1902.	h	m	s	°	′	″
July 28	19	49	50.233	−26	33	34.98
29			.284			34.84
Aug. 4			.260			34.36
6			.288			34.70
1902.58			50.266			34.72

1902. **No. 2284. 63 Sagittarii.**

July 28	19	56	29 246	−13	54	31.16
29			.247			31.22
Aug. 4			.248			31.00
6			.298			31.29
1902.58			29 260			31.17

1902. **No. 2302. ξ Capricorni.**

Aug. 4	20	6	58.291	−12	54	17.31
6			.286			17.23
21			.278			17.92
25			.344			17.38
1902.62			58.300			17.46

1902. **No. 2343. Mayer 866.**

Aug. 4	20	27	2.416	−25	16	29.87
6			.351			29.02
21			.287			30.45
25			.392			29.32
1902.62			2.361			29.66

1902. **No. 2377. P XX 325.**

Aug. 4	20	45	17.741	−12	54	29.16
6			.737			29.19
21			.724			29.35
25			.711			29.18
1902.62			17.728			29.22

1902. **No. 2387. 19 Capricorni.**

Aug. 4	20	49	15.609	−18	17	42.17
6			.674			41.21
21			.677			41.42
25			.666			41.59
1902.62			15.656			41.60

1902. **No. 2413. χ Capricorni.**

Aug. 4	21	2	56.945	−21	35	15.39
6			.931			14.62
21			.908			15.40
25			.952			15.06
1902.62			56.934			15.12

1902. **No. 2446. 18 Aquarii.**

Aug. 4	21	18	50.244	−13	17	55.70
6			.273			56.10
21			.283			55.23
25			.206			55.29
1902.62			50.251			55.58

No. 2578. 50 Aquarii.

1902.	h	m	s	°	′	″
Aug. 21	22	19	12.123	−14	1	34.17
25			.150			34.29
1902.64			12.136			34.23
1903.						
Oct. 5			15.386			16.35
6			.375			16.51
1903.76			15.380			16.43

1902. **No. 2611. 67 Aquarii.**

Aug. 21	22	38	7.214	− 7	28	33.43
25			.291			33.74
1902.64			7.252			33.59
1903.						
Oct. 5			10.361			14.59
6			.401			15.23
1903.76			10.381			14.91

No. 2648. 3 Piscium.

1902.	h	m	s	°	′	″
Aug. 21	22	55	36.336	− 0	20	25.99
25			.393			26.05
1902 64			36.364			26.02
1903.						
Oct. 5			39.470	− 0	20	6.30
6			.446			6.32
1903.76			39.458			6.31

1902. **No. 2667. A Piscium.**

Aug. 21	23	3	39.766	+ 1	35	39.52
25			.776			39.56
1902.64			39.771			39.54
1903.						
Oct. 5			42.814			59.24
6			.830			58.93
1903.76			42.822			59.08

No. 2738 Mayer 1003.

1902.	h	m	s	°	′	″
Aug. 21	23	30	28.735	− 8	0	24.78
25			.762			24.74
1902.64			28.748			24.76
1903.						
Oct. 5			31.889			4.64
6			.937			5.22
1903.76			31.913			4.93

1902. **No. 2765. 20 Piscium.**

Aug. 21	23	42	54.244	− 3	18	23.00
25			.300			22.62
1902.64			54.272			22.81
1903.						
Oct. 5			57.395			3 33
6			.319			3.11
1903.76			57.357			3.22

INDIVIDUAL OBSERVATIONS OF THE ZODIACAL STARS.

The section following, which contains the individual results of observation, requires no extended explanation. The stars are arranged in order of Right Ascension. The numbers from Gill's list of approximate places, London, 1899, have been retained. Stars designated by him as Fundamental, and the 26 extra stars which occur in Newcomb's Catalogue, are given their usual constellation name, in addition. For each Fundamental, the value of the observed Latitude is entered. All of the stars, with but very few exceptions, have been given two observations, in the same position of the instrument. The Fundamental stars have received an average of above five observations, in addition to those made during the extra series, for the determination of the places of the additional Fundamental stars, not contained in Newcomb. No attempt was made to observe the Fundamental stars with uniformity, and the number of observations ranges from two to eighteen. In the extra series, four observations were taken, uniformly. This section includes 6656 observations, of 2839 stars.

	h	m	s		°	′	″
			No. 1.				
1901.							
Nov. 12	0	0	16.078	−	6	15	41.13
13			.081				40.77
			16.080				40.95
1902.			**No. 2.**				
Oct. 15		0	24.478	−	4	23	46.98
31			.461				47.53
			24.470				47.26
1902.			**No. 3.**				
Nov. 4		1	6.814	−	0	25	26.40
26			.792				26 81
			6.803				26.60
1901.			**No. 4.**				
Nov. 7		1	14.576	−	1	47	18.57
8			.563				18.77
			14.570				18.67

	h	m	s		°	′	″
			No. 5.				
1901.							
Nov. 4	0	1	57.932	+	4	44	14.20
5			58.007				14.57
			57.969				14.39
1901.			**No. 6.**				
Nov. 18		1	59.744	+	6	19	30.40
22			.805				29.95
			59.775				30.18
1902.			**No. 7. 4 Ceti.**				
Oct. 2		2	42.845	−	3	5	39.95
29			.891				39.39
Nov. 21			.893				39.32
24			.868				39.63
25			.940				39.80
Dec. 12			.879				39.63
			42.886				39.62
Mean φ (6)					37	20	25.70

	h	m	s		°	′	″
			No. 8.				
1902.							
Nov. 4	0	3	11.032	−	2	59	35.84
26			10.993				35.54
			11.013				35.69
1901.			**No. 9.**				
Nov. 12		3	17.478	+	2	53	26.01
13			.500				25.88
			17.489				25.94
1902.			**No. 10.**				
Dec. 2		3	50.980	+	0	8	48.83
6			.988				48.33
			50.984				48.58
1901.			**No. 11.**				
Nov. 4		4	50.319	+	4	16	52.42
5			.308				52.62
			50.313				52.52

No. 12.

1901.	h m s	° ′ ″
Nov. 7	0 5 14.774	− 5 47 55.98
8	.805	56.09
	14.790	56.04

No. 13.

1901.		
Nov. 18	5 36.415	+ 1 30 14.38
22	.391	14.92
	36.403	14.65

No. 14.

1902.		
Oct. 15	6 8.611	− 3 51 58.69
31	.587	58.89
	8.599	58.79

No. 15.

1902.		
Nov. 21	6 13.909	+ 7 24 10.98
24	.825	11.60
	13.867	11.29

No. 16.

1901.		
Nov. 12	7 35.699	− 1 46 40.73
13	.714	40.74
	35.707	40.73

No. 17.

1902.		
Nov. 4	8 38.479	+ 6 2 8.73
26	.443	S 41
	38.461	8.57

No. 18.

1901.		
Nov. 4	8 57.140	− 4 27 32.14
5	.192	31.92
	57.166	32.03

No. 19.

1902.		
Nov. 25	9 35.163	+ 0 45 7.68
Dec. 12	.174	8.76
	35.168	8.22

No. 20.

1901.		
Nov. 18	9 45.669	− 0 51 11.70
22	.675	11.87
	45.672	11.78

No. 21.

1902.		
Nov. 21	9 55.913	+ 8 16 36.59
24	.866	37.56
	55.889	37.08

No. 22.

1902.	h m s	° ′ ″
Nov. 12	0 10 33.340	+ 5 17 36.71
13	.377	36.56
	33.358	36.64

No. 23.

1902.		
Oct. 15	10 55.428	+ 3 42 24.36
31	.510	24.67
	55.469	24.51

No. 24.

1902.		
Nov. 25	11 31.894	+ 7 41 45.58
Dec. 12	.919	46.01
	31.907	45.80

No. 25.

1902.		
Nov. 4	11 37.955	+ 1 18 20.94
26	.947	20.59
	37.951	20.76

No. 26.

1901.		
Nov. 4	12 18.417	+ 8 19 27.39
5	.506	27.89
	18.462	27.64

No. 27.

1901.		
Nov. 7	13 14.343	− 2 33 53.24
8	.379	53.42
	14.361	53.33

No. 28.

1901.		
Nov. 12	14 12.336	− 0 1 44.35
13	.340	43.96
	12.338	44.15

No. 29.

1902.		
Nov. 21	14 27.151	+ 5 13 0.68
24	.155	0.84
Dec. 2	.134	0.71
	27.145	0.74

No. 30.

1902.		
Oct. 15	15 7.781	+ 2 29 23.63
31	.766	23.47
	7.773	23.55

No. 31.

1902.		
Nov. 25	15 19.757	+ 4 14 6 15
Dec. 12	.707	6.21
	19.732	6.18

No. 32. d Piscium.

1901.	h m s	° ′ ″
Nov. 4	0 15 30.175	+ 7 38 25.82
5	.141	25.57
18	.228	25.48
22	.135	25.88
	30.170	25.69
Mean φ (4)		37 20 25.78
1902.		
Nov. 4	33.243	46.03
26	.219	45.73
	33.231	45.88
Mean φ (2)		37 20 25.73

No. 33.

1902.		
Nov. 21	16 12.438	− 3 51 26.16
24	.363	26.31
	12.400	26.23

No. 34.

1901.		
Nov. 7	16 54.139	+ 6 27 45.92
8	.103	44.97
	54.121	45.44

No. 35.

1901.		
Nov. 12	17 11.185	− 5 44 27.15
13	.145	26.70
	11.165	26.93

No. 36.

1901.		
Nov. 18	18 33.571	+ 2 11 38.70
22	.635	38.89
	33.603	38.80

No. 37.

1902.		
Oct. 15	18 39.379	− 1 5 3.58
31	.436	3.60
	39.408	3.59

No. 38.

1901.		
Nov. 4	19 26.177	− 2 46 0.41
5	.171	0.42
	26.174	0.41

	No. 39. 44 Piscium.	
1901.	h m s	° ′ ″
Nov. 7	0 20 19.670	+ 1 23 29.24
8	.635	29.54
	19.652	29.39
Mean φ (2)		37 20 25.82
1902.		
Dec. 2	22.762	49.63
6	.683	49.24
	22.723	49.44
Mean φ (2)		37 20 25.52
1901.	**No. 40.**	
Nov. 12	20 35.630	+ 7 8 38.38
13	.663	37.80
	35.646	38.09
1902.	**No. 41.**	
Nov. 4	21 10 795	+ 0 37 18.28
26	.772	17.79
	10.783	18.03
1902.	**No. 42.**	
Nov. 21	21 14.380	+ 3 16 58.63
24	.322	59.24
	14.351	58.93
1902.	**No. 43.**	
Nov. 25	21 15.961	+ 5 33 6.77
Dec. 12	.984	6.98
	15.973	6.87
1901.	**No. 44.**	
Nov. 18	21 32.720	− 0 35 53.20
22	.777	52.28
	32.748	52.74
1902.	**No. 45.**	
Oct. 15	21 48.967	+ 8 46 35.63
31	49.022	35.54
	48.995	35.58
1901.	**No. 46.**	
Nov. 4	22 15.368	+ 2 15 58.10
5	.402	59.20
	15.385	58.65
1901.	**No. 47.**	
Nov. 7	23 12.934	+ 9 38 50.91
8	.927	50 99
	12.930	50.95

	No. 48.	
1901.	h m s	° ′ ″
Nov. 12	0 24 35.065	− 3 23 12.66
13	.063	12.83
	35.064	12.75
1902.	**No. 49.**	
Dec. 2	24 49.781	− 0 51 46.90
6	680	47.17
	49.730	47.03
1902.	**No. 50.**	
Oct. 15	24 53.486	− 1 39 26.19
31	.637	26.64
	53.561	26.41
1901.	**No. 51. 12 Ceti.**	
Nov. 18	24 59.206	− 4 30 15.37
22	.234	15.90
	59.220	15.63
Mean φ (2)		37 20 25.93
1902.		
Nov. 4	25 2.348	29 55.11
25	.255	55.39
26	.325	55.46
Dec. 12	.255	55.67
	2.296	55.41
Mean φ (4)		37 20 25.98
1902.	**No. 52.**	
Nov. 21	25 6.380	+ 4 19 4.70
24	.252	4.92
	6.316	4.81
1901.	**No. 53.**	
Nov. 4	26 30.498	+ 8 36 52.25
5	.562	52.45
	30.530	52.35
1901.	**No. 54.**	
Nov. 7	26 51.693	+ 0 57 48.25
8	.691	48.27
	51.692	48.26
1902.	**No. 55.**	
Dec. 2	27 20.287	+ 6 24 51.46
6	.360	51.43
	20.323	51.44

	No. 56.	
1901.	h m s	° ′ ″
Nov. 12	0 28 49.115	+ 2 46 26.41
13	.056	26.97
	49.086	26.69
1901.	**No. 57.**	
Nov. 18	29 2.864	+ 9 45 26.34
22	.880	26.22
	2.872	26.28
1902.	**No. 58.**	
Oct. 15	29 15.250	− 2 56 7.25
31	.397	7.49
	15.323	7.37
1902.	**No. 59.**	
Nov. 4	29 22.582	+ 0 27 44.48
26	.560	44.02
	22.571	44.25
1901.	**No. 60.**	
Nov. 4	30 23.053	+ 3 44 56.32
5	.076	55.94
	23.065	56.13
1901.	**No. 61.**	
Nov. 7	30 27.886	− 1 2 58.03
8	.836	58.88
	27 861	58.46
1902.	**No. 62.**	
Nov. 21	31 20.255	+ 8 20 6.46
24	.155	6.67
	20.205	6.56
1901.	**No. 63.**	
Nov. 12	31 50.707	+ 4 52 2.32
13	.782	2.19
	50.744	2.25
1902.	**No. 64.**	
Nov. 25	31 56.926	− 3 56 22.98
Dec. 12	.856	22.76
	56.891	22.87
1901.	**No. 65.**	
Nov. 18	32 9.354	+ 10 53 29.98
22	.399	29.70
	9.376	29.84

	h m s	° ′ ″
	No. 66.	
1902.		
Oct. 15	0 32 27.640	+ 2 35 51.75
31	.738	51.79
	27.689	51.77
1902.	**No. 67.**	
Nov. 4	32 48.758	+ 1 51 18.84
26	48.751	17.20
	48.755	18.02
1901.	**No. 68.**	
Nov. 4	33 43.687	+ 0 24 13.23
5	43.828	13.28
	43.758	13.25
1901.	**No. 69.**	
Nov. 7	33 50.495	+ 7 22 16.60
8	.500	16.82
	50.498	16.71
1902.	**No. 70.**	
Nov. 21	34 34.269	+10 59 38.59
24	.249	38.85
	34.259	38.72
1901.	**No. 71.**	
Nov. 12	35 29.225	− 2 18 46.71
13	.180	46.64
	29.202	46.67
1901.	**No. 72.**	
Nov. 18	36 4.862	+ 8 48 51.46
22	.859	52.07
	4.860	51.76
1902.	**No. 73.**	
Oct. 15	37 20.259	+ 3 37 49.16
31	.383	48.82
	20.321	48.99
1902.	**No. 74.**	
Nov. 4	37 36.046	− 0 52 56.29
26	.081	56.68
	36.064	56.48
1902.	**No. 75.**	
Nov. 25	37 59.473	+ 8 2 12.64
Dec. 12	.480	12.93
	59.477	12.79

	h m s	° ′ ″
	No. 76.	
1901.		
Nov. 4	0 38 12.330	+ 1 30 39.52
5	.424	39.72
	12.377	39.62
1901.	**No. 77.**	
Nov. 12	38 24.505	+ 5 36 43.97
13	.515	44.15
	24.510	44.06
1901.	**No. 78.**	
Nov. 7	40 4.953	− 0 17 14.06
8	.965	14.06
	4.959	14.06
1901.	**No. 79.**	
Nov. 18	40 40.876	− 1 43 36.12
22	.950	36.12
	40.913	36.12
1902.	**No. 80.**	
Oct. 15	41 54.686	+11 26 22.14
31	.767	21.73
	54.726	21.94
1902.	**No. 81.**	
Nov. 4	42 36.833	− 2 51 26.06
26	.803	26.33
	36.818	26.20
1902.	**No. 82.**	
Nov. 21	43 5.794	+ 8 41 13.42
24	.649	13.75
	5.722	13.58
1902.	**No. 83.**	
Nov. 25	43 11.198	+ 2 11 40.64
Dec. 12	.119	40.60
	11.159	40.62
1902.	**No. 84.**	
Dec. 2	43 11.517	+ 9 43 26.65
13	.603	26.50
	11.560	26.58
1901.	**No. 85.**	
Nov. 4	43 9.119	+ 6 45 34.01
5	.238	33.93
	9.179	33.97

	h m s	° ′ ″
	No. 86.	
1901.		
Nov. 7	0 43 11.401	+ 4 46 17.72
8	.391	16.92
	11.396	17.32
1901.	**No. 87. δ Piscium.**	
Nov. 12	43 32.739	+ 7 2 46.63
13	.748	46.71
	32.743	46.67
Mean φ (2)		37 20 26.14
1902.		
Dec. 16	35.856	3 6.26
22	.793	6.43
	35.824	6.34
Mean φ (2)		37 20 25.84
1901.	**No. 88.**	
Nov. 18	44 50.775	− 0 45 49.21
22	.814	48.95
	50.795	49.08
1902.	**No. 89.**	
Oct. 15	45 4.980	+11 17 51.06
31	5.100	51.75
Dec. 16	.100	. .
	5.060	51 40
1903.		
Jan. 5	8.212	18 9.76
1902.	**N. Fol.**	
Dec. 16	45 53.933	+11 18 51.47
1902.	**No. 90.**	
Nov. 4	45 27.255	+ 9 52 40.56
26	.194	40.47
	27.224	40.51
1902.	**No. 91.**	
Nov. 21	46 15.498	+ 2 51 12.24
24	.458	13.13
	15.478	12.68
1902.	**No. 92.**	
Nov. 25	46 24.281	+ 0 22 39.25
Dec. 12	.277	39.43
	24.279	39.34
1902.	**No. 93.**	
Dec. 2	. . .	
Dec. 13	46 26.199	+ 1 51 31.87

	h	m	s	°	′	″
			No. 94.			
1901.	h	m	s	°	′	″
Nov. 4	0	46	23.802	+12	14	47.50
5			.876			47.98
			23.839			47.74
1901.			**Anon.**			
Nov. 7		46	31.302	+ 3	29	1.91
1901.			**No. 95.**			
Nov. 8		46	49.813	+ 3	31	18.73
Dec. 23			.735			18.83
			49.774			18.78
1901.			**No. 96.**			
Nov. 12		46	57.874	+10	3	47.14
13			.862			48.06
			57.868			47.60
1901.			**No. 97.**			
Nov. 18		47	17.721	+13	6	39.51
22			.702			39.73
			17.712			39.62
1902.			**No. 98.**			
Oct. 15		47	26.951	+ 8	7	59.53
31			.993			59.77
			26.972			59.65
1902.			**No. 99.**			
Nov. 4		47	41.233	+ 9	16	19.95
26			.162			19.07
			41.198			19.51
1902.		**No. 100.**	**20 Ceti.**			
Nov. 21		47	59.971	− 1	40	35.21
24			.933			34.83
Dec. 24			.990			35.48
29			.975			35.00
			59.967			35.13
Mean φ (4)				37	20	26.67
1902.			**No. 101.**			
Nov. 25		48	43.649	+10	35	26.81
Dec. 12			.620			27.49
			43.634			27.15
1902.			**No. 102.**			
Dec. 2		48	54.026	+ 5	16	37.36
13			.011			37.12
22			53.956			36.65
			53.998			37.04
1903. Jan. 5			57.162			56.11

	h	m	s	°	′	″
			No. 103.			
1901.	h	m	s	°	′	″
Nov. 4	0	49	36.161	+ 8	53	32.96
5			.256			32.75
			36.208			32.85
1901.			**No. 104.**			
Nov. 7		49	49.596	+12	18	39.02
8			.600			39.57
			49.598			39.30
1901.			**No. 105.**			
Nov. 18		50	57.454	+13	24	56.41
22			.444			56.40
			57.449			56.40
1901.			**No. 106.**			
Nov. 12		51	17.960	+12	10	38.57
13			18.014			39.12
			17.987			38.85
1902.			**No. 106a.**			
Dec. 16		51	26.846	+ 8	41	57.47
22			.896			57.02
			26.871			57.24
1902.			**No. 107.**			
Oct. 15		51	39.797	+ 9	29	8.59
31			.888			8.04
			39.842			8.31
1902.			**No. 108.**			
Nov. 4		52	11.871	− 0	11	15.70
26			.777			16.06
			11.824			15.88
1902.			**No. 109.**			
Nov. 21		52	13.684	+11	52	59.34
24			.660			59.84
			13.672			59.59
1902.			**No. 110.**			
Nov. 25		52	37.586	+ 1	15	19.02
Dec. 12			.613			20.00
			37.600			19.51
1902.			**No. 111.**			
Dec. 2		52	45.835	+13	9	57.86
13			.856			58.50
			45.846			58.18

	h	m	s	°	′	″
			No. 112.			
1901.	h	m	s	°	′	″
Nov. 4	0	52	49.665	+ 7	4	34.35
5			.763			34.07
			49.714			34.21
1901.			**No. 114.**			
Nov. 12		53	11.290	+ 6	18	34.00
13			.340			34.44
			11.315			34.22
1901.			**No. 113.**			
Nov. 7		53	12.186	+ 3	45	42.59
8			.183			42.19
			12.184			42.39
1901.			**No. 115.**			
Nov. 18		54	16.571	− 1	12	30.61
22			.676			30.25
			16.624			30.43
1902.			**No. 116.**			
Oct. 15		54	34.689	+14	4	51.81
31			.793			51.95
			34.741			51.88
1902.			**No. 117.**			
Nov. 4		55	3.255	+ 2	6	17.42
26			.210			16.18
			3.233			16.80
1902.			**No. 118.**			
Nov. 21		55	40.289	− 2	11	10.65
24			.218			10.43
			40.253			10.54
1902.			**No. 119.**			
Nov. 25		56	6.410	+10	39	11.68
Dec. 12			.347			11.76
			6.378			11.72
1902.			**No. 120.**			
Dec. 2		56	27.893	+ 4	36	26.57
13			27.907			26.40
			27.900			26.49
1901.			**No. 121.**			
Nov. 4		56	46.365	+ 9	33	25.27
5			.523			24.50
			46.444			24.89

	h m s	° ′ ″
No. 122.		
1901.		
Nov. 7	0 57 21.321	+13 43 11.13
8	.296	10.64
	21.309	10.88
1901. **No. 123.**		
Nov. 12	57 32.602	+ 8 36 5.24
13	.578	5.50
	32.590	5.37
1901. **No. 124. ε Piscium.**		
Dec. 16	57 48.292	+ 7 21 25.94
17	.195	26.31
	48.244	26.12
Mean φ (2)		37 20 25.62
1902.		
Oct. 15	51.349	45.47
31	.343	45.66
	51.346	45.56
Mean φ (2)		37 20 26.10
1903.		
Jan. 5	54.468	22 5.12
6	.508	5.08
	54.488	5.10
Mean φ (2)		37 20 25.38
1901. **No. 125.**		
Nov. 18	57 54.179	+12 31 2.61
22	.176	2.76
	54.177	2.68
1902. **No. 126.**		
Nov. 4	58 41.587	+13 24 39.84
26	.549	38.86
	41.568	39.35
1901. **No. 127. 26 Ceti.**		
Nov. 4	58 43.317	+ 0 50 10.59
5	.328	10.47
	43.322	10.53
Mean φ (2)		37 20 25.78
1902. **No. 128.**		
Nov. 25	59 16.187	+ 0 5 23.29
Dec. 12	.160	23.42
	16.171	23.36

	h m s	° ′ ″
No. 129.		
1902.		
Dec. 2	0 59 44.072	+ 6 31 23.36
24	.080	22.76
29	.087	22.95
	44.080	23.02
1902. **No. 130.**		
Nov. 21	59 47.903	+ 5 7 52.08
24	.930	52.59
	47.916	52.33
1902. **No. 131. 72 Piscium.**		
Dec. 16	59 54.839	+14 25 8.66
22	.867	8.82
	54.853	8.74
Mean φ (2)		37 20 25.81
1901. **No. 132.**		
Nov. 7	1 0 41.882	+ 4 22 52.37
8	.843	52.29
	41.862	52.33
1901. **No. 133.**		
Nov. 12	0 42.368	+14 51 14.70
13	.344	14.81
	42.356	14.76
1901. **No. 134.**		
Nov. 18	0 59.349	+ 2 44 42.38
22	.405	42.52
	59.377	42.45
1901. **No. 135.**		
Dec. 16	1 7.705	+15 47 1.79
17	.713	2.23
	7.709	2.01
1901. **No. 136.**		
Dec. 18	1 21.047	+12 25 31.60
19	.054	31.80
	21.050	31.70
1902. **No. 137.**		
Dec. 24	1 24.719	− 1 16 24.76
29	.743	24.47
	24.731	24.61
1903. **No. 138.**		
Jan. 5	1 29.427	+13 21 59.20
6	.483	59.26
	29.455	59.23

	h m s	° ′ ″
No. 139.		
1902.		
Dec. 16	1 1 31.659	+ 7 50 12.09
22	.610	11.62
	31.634	11.86
1902. **No. 140.**		
Nov. 4	1 55.047	+11 1 40.41
26	.060	39.47
	55.053	39.94
1901. **No. 141.**		
Nov. 7	2 37.452	+15 20 6.68
8	.498	6.45
	37.475	6.56
1901. **No. 142.**		
Nov. 12	3 11.207	+ 9 22 45.93
13	.204	46.13
	11.205	46.03
1902. **No. 143.**		
Nov. 21	3 19.227	+ 5 7 52.80
24	.172	53.29
	19.200	53.05
1901. **No. 144.**		
Dec. 16	4 56.395	+15 8 49.13
17	.405	49.66
	56.400	49.40
1901. **No. 145.**		
Nov. 18	5 25.810	+ 6 13 25.69
22	.829	26.05
	25.820	25.87
1901. **No. 146.**		
Dec. 18	5 27.838	+ 1 55 7.98
19	.822	8.02
	27.830	8.00
1902. **No. 147.**		
Nov. 25	5 51.664	+16 15 21.73
Dec. 12	.625	21.33
	51.644	21.53
1902. **No. 148.**		
Dec. 2	6 5.244	+14 10 15.48
13	.234	15.11
	5.239	15.30

		h	m	s	°	′	″
	No. 149.						
1901.		h	m	s	°	′	″
Nov. 7		1	6	20.780	+ 3	54	10.39
8				.783			9 89
				20.781			10.14
1901.	**No. 150.**						
Nov. 12			6	31.932	+13	21	0.81
13				.949			1.25
				31.940			1.03
1902.	**No. 151.**						
Dec. 24			6	36.059	+ 8	3	29.94
29				.121			29.90
				36.090			29.92
1903.	**No. 152.**						
Jan. 5			7	13.321	+11	46	4.42
6				.341			4.35
				13.331			4.38
1901.	**No. 153.**						
Nov. 18			7	34.064	+16	14	19.08
22				.042			19.53
				34.053			19.30
1901.	**No. 154.** **ζ Piscium.**						
Dec. 16			8	33.488	+ 7	3	7.17
17				.506			7.17
18				.479			7.07
19				.530			7.02
				33.501			7.11
Mean φ (4)					37	20	25.59
1902.							
Nov. 4				36.578			26.40
21				.566			25.94
24				.589			26.43
25				.642			26.48
26				.524			25.82
Dec. 12				.601			26.72
				36.583			26.30
Mean φ (6)					37	20	25.64
1902.	**No. 155.**						
Dec. 16			8	38.164	+10	17	38.19
22				.145			37.61
				38.154			37.90
1902.	**No. 156.**						
Dec. 2			8	55.158	+15	36	52.71
13				.174			53.42
				55.166			53.06
	No. 157.						
1902.		h	m	s	°	′	″
Dec. 24		1	9	36.508	+ 6	28	36.95
29				.531			37.11
				36.520			37.03
1901.	**No. 158.**						
Nov. 7			10	30.667	+ 0	23	19.35
8				.643			19.04
				30.655			19.20
1901.	**No. 159.**						
Nov. 12			10	35.995	+ 9	15	37.58
13				36.051			37.02
				36.023			37.30
1901.	**No. 160.**						
Nov. 18			10	54.219	+17	6	42.14
22				.301			42.67
				54.260			42.41
1901.	**No. 161.**						
Dec. 16			11	29.526	+ 2	12	45.85
17				.521			46.24
				29.523			46.04
1901.	**No. 162.**						
Dec. 18			11	36.697	+ 4	31	59.25
19				.698			60.06
				36.698			59.66
1902.	**No. 163.**						
Dec. 16			12	15.839	+15	50	15.51
22				.787			15.33
				15.813			15.42
1903.	**No. 164.**						
Jan. 5			12	24.441	+13	43	54.69
6				.473			54.79
				24.457			54.74
1902.	**No. 165.** **f Piscium.**						
Dec. 2			12	44.605	+ 3	5	54.50
13				.612			55.04
24				.564			54.77
29				.570			54.89
				44.588			54.80
Mean φ (4)					37	20	25.69
	No. 166.						
1901.		h	m	s	°	′	″
Nov. 7		1	14	17.912	+ 7	52	29.51
8				.885			29.70
				17.898			29.60
1901.	**No. 167.**						
Nov. 12			14	29.136	+11	37	31.41
13				.213			31.45
				29.174			31.43
1901.	**No. 168.**						
Nov. 18			15	24.234	+15	10	35.55
22				.339			35.96
				24.286			35.75
1901.	**No. 169.**						
Dec. 16			16	5.742	+11	1	2.72
17				.693			3.33
				5.717			3.02
1901.	**No. 170.**						
Dec. 18			16	43.977	+12	5	7.99
19				.983			8.73
				43.980			8.36
1902.	**No. 171.**						
Dec. 2			17	14.812	+ 3	0	15.34
13				.746			15.82
				14.779			15.58
1902.	**No. 172.**						
Dec. 16			17	21.063	+ 5	13	26.52
22				.100			26.99
				21.081			26.76
1902.	**No. 173.**						
Dec. 24			17	34.863	+ 9	51	33.31
29				.924			33.13
				34.894			33.22
1901.	**No. 174.**						
Nov. 7			17	31.124	+ 1	12	34.32
8				.119			34.15
				31.122			34.23
1901.	**No. 175.**						
Nov. 12			17	35.866	+ 4	13	16.00
13				.852			15.52
				35.859			15.76

No. 176.

1901.	h m s	° ′ ″
Nov. 18	1 17 40.131	+10 50 59.12
22	.107	59.39
	40.119	59.26

No. 177.

1901.		
Dec. 16	17 46.214	+ 6 53 42.91
17	.148	43.22
	46.181	43.06

No. 178.

1903.		
Jan. 5	18 1.409	+ 8 40 54.01
6	.495	54.02
	1.452	54.01

No. 179.

1901.		
Dec. 18	18 44.426	+14 47 18.91
19	.361	18.93
	44.393	18.92

No. 180.

1902.		
Dec. 2	19 7.517	+13 23 25.23
13	.511	25.73
	7.514	25.48

No. 181.

1901.		
Nov. 7	20 33.906	+ 2 27 24.50
8	.936	25.03
	33.921	24.76

No. 182.

1901.		
Nov. 12	20 45.270	+ 9 53 29.52
13	.296	29.57
	45.283	29.55

No. 183.

1901.		
Nov. 18	21 46.490	+ 3 1 18.15
22	.635	18.52
	46.562	18.34

No. 184.

1902.		
Dec. 18	21 50.779	+10 51 31.84
22	.911	31.86
	50.845	31.85

No. 185.

1901.		
Dec. 18	22 31.373	+ 4 50 32.84
19	.364	33.59
	31.368	33.21

No. 186.

1902.	h m s	° ′ ″
Dec. 2	1 23 7.880	+16 34 19.24
13	.854	19.63
	7.867	19.43

No. 187.

1901.		
Dec. 16	23 11.357	+ 7 26 54.08
17	.398	54.14
	11.377	54.11

No. 188.

1902.		
Dec. 24	24 2.009	+19 10 15.60
29	.054	15.46
	2.032	15.53

No. 189.

1901.		
Nov. 7	24 10.437	+11 52 37.56
8	.445	37.35
	10.441	37.45

No. 190.

1901.		
Nov. 12	24 37.047	+13 41 53.50
13	.053	53.04
	37.050	53.27

No. 191.

1901.		
Nov. 18	24 59.888	+ 5 38 0.55
22	.876	1.25
	59.882	0.90

No. 192.

1901.		
Dec. 18	25 48.465	+ 1 42 37.65
19	.453	38.03
	48.459	37.84

1901. **No. 193. *η* Piscium.**

1901.		
Dec. 16	26 11.016	+14 50 7.81
17	.113	7.42
	11.064	7.62
Mean φ (2)		37 20 26.21
1902.		
Dec. 16	14.289	25.85
22	.272	26.47
	14.280	26.16
Mean φ (2)		37 20 26.25

No. 194.

1902.		
Dec. 2	26 31.818	+10 23 2.46
13	.854	2.64
	31.836	2.55

No. 195.

1903.	h m s	° ′ ″
Jan. 5	1 26 42.794	+15 33 4.47
6	.862	4 86
	42.828	4.66

No. 196.

1902.		
Dec. 24	27 47.518	+ 4 16 14.69
29	.562	15.45
	47.540	15.07

No. 197.

1901.		
Nov. 7	28 37.721	+ 3 15 49.79
8	.801	49.25
	37.761	49.52

No. 198.

1901.		
Nov. 12	28 43.334	+ 8 29 8.46
13	.371	8.45
	43.352	8.45

No. 199.

1901.		
Nov. 18	29 35.940	+12 3 6.22
22	.936	5.99
	35.938	6.10

No. 200.

1901.		
Dec. 16	29 37.726	+13 52 41.42
17	.664	41.70
	37.695	41.56

No. 201.

1901.		
Dec. 18	30 19.502	+10 3 18.32
19	.548	18.59
	19.525	18.45

No. 202.

1903.		
Jan. 5	30 35.070	+14 9 55.71
6	.122	56.03
	35.096	55.87

No. 203.

1902.		
Dec. 16	30 55.048	+ 7 8 38.43
22	.108	38.52
	55.078	38.48

No. 204.

1902.		
Dec. 24	31 11.915	+ 3 48 48.91
29	.988	49.12
	11.951	49.02

No. 205.

1901.	h	m	s	°	′	″
Nov. 7	1	31	31.061	+ 6	12	47.63
8			.055			47.55
			31.058			47.59

1901. **No. 206. *π* Piscium.**

Nov. 12		31	50.920	+11	38	6.73
13			.898			6.83
			50.909			6.78
Mean *φ* (2)				37	20	25.97
1902.						
Dec. 2			54.134	+11	38	24.59
13			.074			25.28
			54.104			24.94
Mean *φ* (2)				37	20	26.20

1901. **No. 207.**

Nov. 18		31	52.143	+ 5	7	40.04
22			.142			40.21
			52.142			40.13

1901. **No. 208.**

Dec. 16		33	13.330	+ 2	4	55.91
17			.360			56.17
			13.345			56.04

1901. **No. 209.**

Dec. 18		33	55.015	+16	7	22.73
19			54.978			22.94
			54.996			22.84

1902. **No. 210.**

Dec. 2		34	0.234	+13	47	17.85
13			.239			18.50
			0.237			18.18

1902. **No. 211.**

Dec. 16		34	23.489	+15	54	30.76
22			.496			31.01
			23.492			30.89

1902. **No. 212.**

Dec. 24		34	27.992	+14	55	37.77
29			28.053			37.31
			28.023			37.54

No. 213.

1901.	h	m	s	°	′	″
Nov. 7	1	35	21.971	+ 8	15	31.81
8			.965			31.50
			21.968			31.66

1901. **No. 214.**

Nov. 12		35	58.335	+ 7	5	23.65
13			.307			24.08
			58.321			23.87

1901. **No. 215. *ν* Piscium.**

Nov. 18		36	16.686	+ 4	59	12.61
22			.736			12.64
			16.711			12.63
Mean *φ*(2)				37	20	25.37
1903.						
Jan. 5		36	22.876	+ 4	59	48.57
6			.948			49.11
			22.912			48.84
Mean *φ*(2)				37	20	25.78

1901. **No. 216.**

Dec. 16		36	47.573	+ 4	10	21.07
17			.577			21.06
			47.575			21.07

1901. **No. 217.**

Dec. 18		37	6.936	+15	16	44.44
19			.965			44.12
			6.950			44.28

1902. **No. 218.**

Dec. 2		37	25.021	+ 9	45	1.57
13			.031			2.07
			25.026			1.82

1902. **No. 219.**

Dec. 16		37	37.996	+10	35	30.43
22			38.081			31.09
			38.039			30.76

1902. **No. 220.**

Dec. 24		37	49.152	+12	4	24.77
29			.195			24.57
			49.173			24.67

1901. **No. 221.**

Nov. 7		38	44.255	+ 3	5	31.74
8			.282			30.83
			44.268			31.29

No. 222.

1901.	h	m	s	°	′	″
Nov. 12	1	39	7.005	+13	33	35.72
13			7.041			36.21
			7.023			35.96

1901. **No. 223. *o* Piscium.**

Dec. 18		40	9.865	+ 8	39	34.57
19			.877			35.06
			9.871			34.81
Mean *φ*(2)				37	20	25.54
1903.						
Jan. 5			16.206	+ 8	40	10.74
6			.192			10.92
			16.199			10.83
Mean *φ* (2)				37	20	25.70

1901. **No. 224 S. p.**

Nov. 22		40	32.810	+14	30	27.18
Dec. 17			.868			27.55
			32.839			27.36

1901. **No. 224 N. f.**

Nov. 18		40	34.332	+14	30	47.70
Dec. 16			.330			47.92
			34.331			47.81

1902. **No. 225.**

Dec. 2		41	6.134	+ 6	2	43.25
13			.171			43.01
			6.152			43.13

1902. **No. 226.**

Dec. 24		41	16.054	+16	55	19.14
29			.058			19.01
			16.056			19.07

1902. **No. 227.**

Dec. 16		41	57.045	+10	21	17.32
22			.064			16.68
			57.054			17.00

1901. **No. 228.**

Nov. 7		42	18.643	+12	41	46.48
8			.691			45.45
			18.667			45.96

1901. **No. 229.**

Nov. 12		42	48.661	+16	27	44.72
13			.646			45.04
			48.653			44.88

	h	m	s	°	′	″
			No. 230.			
1901.						
Nov. 18	1	43	28.463	+ 7	11	28.25
22			.541			28.15
			28.502			28.20
1903.			**No. 231.**			
Jan. 5		44	26.317	+ 5	8	39.78
6			.396			39.63
			26.356			39.70
1901.			**No. 232.**			
Dec. 18		44	46.151	+ 13	51	26.71
19			.195			27.11
			46.173			26.91
1901.			**No. 233. 54 Ceti.**			
Nov. 7		45	36.689	+ 10	33	11.63
8			.687			10.95
			36.688			11.29
Mean φ (2)				37	20	26.16
1902.						
Dec. 24		45	39.844			29.06
29			.941			29.49
			39.892			29.28
Mean φ (2)				37	20	26.08
1901.			**No. 234.**			
Nov. 12		45	52.156	+ 3	43	52.55
13			.164			52.46
			52.160			52.51
1901.			**No. 235.**			
Nov. 18		46	18.409	+ 8	18	44.11
22			.534			43.97
			18.471			44.04
1901.			**No. 236.**			
Dec. 16		47	38.628	+ 4	10	27.95
17			.603			28.72
			38.615			28.34
1901.			**No. 237.**			
Dec. 18		47	53.383	+ 14	56	40.47
19			.407			40.36
			53.395			40.42
1902.			**No. 238.**			
Dec. 2		48	15.505	+ 12	12	1.00
13			.414			1.66
			15.460			1.33
1902.			**No. 239.**			
Dec. 16		48	29.137	+ 7	9	4.44
22			.216			4.47
			29.176			4.46

	h	m	s	°	′	″
			No. 240.			
1902.						
Dec. 24	1	48	59.905	+ 9	28	13.20
29			.936			12.75
			59.920			12.97
1901.			**No. 241.**			
Nov. 7		49	7.911	+ 10	54	54.87
8			.938			53.78
			7.924			54.33
1901.			**No. 242.**			
Nov. 12		49	8.607	+ 8	17	38.47
13			.500			38.18
			8.554			38.33
1901.			**No. 243.**			
Nov. 18		49	27.997	+ 13	16	13.15
22			.988			13.31
			27.992			13.23
1902.			**No. 245.**			
Dec. 2		50	10.524	+ 5	57	25.00
13			.492			25.32
			10.508			25.16
1901.			**No. 244.**			
Dec. 16		50	7.906	+ 16	42	13.05
17			.897			13.09
			7.902			13.07
1901.			**No. 246. 2 Arietis.**			
Dec. 18		51	56.429	+ 17	20	4.06
19			.440			3.79
20			.434			3.97
26			.451			3.64
			56.438			3.86
Mean φ (4)				37	20	25.65
1902.						
Jan. 3			59.692			21.57
6			.692			21.77
Dec. 16			.684			21.21
22			.701			21.57
24			.691			21.62
29			.746			21.54
30			.652			20.91
			59.694			21.46
Mean φ (7)				37	20	25.85
1903.						
Jan. 5		52	2.991	+ 17	20	39.05
6			.912			39.31
			2.951			39.18
Mean φ (2)				37	20	25.65

	h	m	s	°	′	″
			No. 247.			
1901.						
Nov. 7	1	53	16.282	+ 15	26	52.69
8			.316			52.27
			16.299			52.48
1901.			**No. 248.**			
Nov. 12		54	7.734	+ 11	48	52.18
13			.817			52.65
			7.776			52.41
1901.			**No. 249.**			
Dec. 20		54	47.161	+ 5	33	18.90
26			.185			19.76
			47.173			19.33
1901.			**No. 250.**			
Dec. 16		55	0.309	+ 6	10	25.10
17			.357			25.07
			0.333			25.09
1901.			**No. 251.**			
Dec. 18		55	6.569	+ 10	8	59.86
19			.563			59.99
			6.566			59.92
1902.			**No. 252.**			
Jan. 3		55	15.949	+ 3	54	50.34
6			.942			51.37
			15.945			50.86
1902.			**No. 253.**			
Dec. 2		55	33.852	+ 8	44	14.70
13			.703			14.58
			33.778			14.64
1901.			**No. 254.**			
Nov. 18		55	46.588	+ 16	5	11.51
22			.670			11.60
			46.629			11.55
1901.			**No. 255.**			
Nov. 7		56	28.705	+ 14	35	19.26
8			.609			18.20
			28.657			18.73
1901.			**No. 256.**			
Nov. 12		56	38.654	+ 7	23	14.84
13			.576			14.55
			38.615			14.70

No. 257.

1901.	h m s	° ′ ″
Dec. 16	1 57 15.314	+12 59 57.45
17	.287	57.66
	15.300	57.55

No. 258.

1901.		
Nov. 18	57 20.829	+ 8 36 16.70
22	.897	16.04
	20.863	16.37

No. 259.

1901.		
Dec. 18	58 16.715	+17 46 39.35
19	.720	38.97
	16.718	39.16

No. 260.

1901.		
Nov. 7	2 0 18.142	+17 10 37.77
8	.197	37.30
	18.170	37.53

No. 261.

1901.		
Nov. 12	0 22.250	+12 36 59.12
13	.344	59.56
	22.297	59.34

No. 262.

1902.		
Jan. 3	0 50.341	+20 7 28.11
6	.285	28.06
	50.313	28.09

No. 263.

1901.		
Dec. 16	0 58.606	+ 7 46 31.16
17	.527	31.75
	58.566	31.45

No. 264.

1901.		
Dec. 18	1 20.011	+14 6 41.69
19	19.971	41.08
	19.991	41.38

No. 265.

1901.		
Dec. 20	1 23.443	+10 0 18.47
26	.429	18.18
	23.436	18.32

No. 266.

1901.		
Nov. 18	2 19.806	+17 33 28.98
22	.800	28.77
	19.803	28.87

No. 267.

1902.	h m s	° ′ ″
Dec. 16	2 2 39.085	+ 5 31 9.70
30	.098	9.16
	39.092	9.43

No. 268.

1902.		
Dec. 24	2 43.510	+15 20 21.20
29	.581	21.35
	43.546	21.27

No. 269.

1902.		
Dec. 2	2 52.820	+10 43 27.55
13	.853	27.34
	52.837	27.44

No. 270.

1902.		
Jan. 3	3 7.776	+ 8 23 5.55
6	.777	5.15
	7.776	5.35

No. 271.

1901.		
Nov. 7	3 44.245	+ 6 32 17.63
8	.162	17.47
	44.203	17.55

No. 272.

1901.		
Nov. 12	3 56.647	+16 45 35.44
13	.571	35.69
	56.609	35.57

No. 273.

1901.		
Nov. 18	4 12.958	+19 52 45.62
22	13.134	45.59
	13.046	45.61

No. 274.

1901.		
Dec. 16	4 26.380	+12 42 25.42
17	.398	25.50
	26.389	25.46

No. 275.

1901.		
Dec. 18	5 8.274	+19 2 0.68
19	.263	0.39
	8.269	0.53

No. 276.

1901.		
Dec. 20	5 49.738	+20 54 39.36
26	.705	39.21
	49.722	39.28

No. 277.

1902.	h m s	° ′ ″
Jan. 3	2 6 10.600	+ 8 6 39.91
6	.571	39.88
	10.586	39.89

No. 278.

1902.		
Dec. 24	7 16.354	+ 9 52 8.25
29	.387	7.53
	16.370	7.89

No. 279.

1903.		
Jan. 5	7 22.074	+20 45 19.17
6	.071	19.20
	22.072	19.18

No. 280.

1902.		
Dec. 16	7 24.134	+13 27 30.57
30	.158	30.23
	24.146	30.40

No. 281.

1901.		
Nov. 18	7 39.209	+14 48 56.96
22	.227	56.85
	39.218	56.91

No. 282. ξ Ceti.

1901.		
Nov. 7	7 45.064	+ 8 22 56.48
8	.062	56.13
	45.063	56.30
Mean φ (2)		37 20 26.27

No. 283.

1901.		
Dec. 16	8 22.100	+19 9 3.04
17	.071	3.39
	22.086	3.22

No. 284.

1901.		
Dec. 18	8 53.148	+11 49 16.16
19	.151	16.31
	53.150	16.23

No. 285.

1901.		
Dec. 20	10 31.495	+15 21 34.73
26	.485	34.71
	31.490	34.72

No. 287.

1902.		
Dec. 16	11 9.180	+ 6 31 1.18
30	.193	0.51
	9.186	0.84

No. 288.

1902.	h	m	s	°	′	″
Dec. 24	2	11	38.873	+ 9	19	54.30
29			.896			54.10
			38.884			54.20

No. 289.

1903.						
Jan. 5		11	43.767	+16	51	59.02
6			.770			58.66
			43.768			58.84

No. 290.

1902.						
Jan. 3		12	19.974	+18	0	2.32
6			.929			2.72
			19.951			2.52

No. 291. θ Arietis

1901.						
Nov. 18		12	37.036	+19	26	35.87
22			.048			35.43
Dec. 18			.008			36.28
19			.020			35.96
			37.028			35.89
Mean φ (4)				37	20	25.83
1902.						
Dec. 2			40.306			52.92
13			.370			53.17
			40.338			53.04
Mean φ (2)				37	20	25.56

No. 292.

1901.						
Dec. 16		13	0.641	+21	26	26.99
17			.593			27.13
			0.617			27.06

No. 293.

1901.						
Dec. 20		13	29.775	+12	32	3.24
26			.792			3.24
			29.784			3.24

No. 294.

1903.						
Jan. 5		13	45.068	+19	14	38.44
6			.055			37.93
			45.061			38.18

No. 295.

1902.						
Dec. 16		14	53.757	+13	50	52.86
30			.721			52.61
			53.739			52.74

No. 296.

1902.	h	m	s	°	′	″
Dec. 24	2	15	4.678	+19	40	28.81
29			.679			28.17
			4.678			28.49

No. 297.

1901.						
Nov. 18		15	35.565	+ 9	33	9.72
22			.579			9.85
			35.572			9.78

No. 298.

1901.						
Dec. 16		16	6.438	+ 8	25	36.70
17			.409			37.35
			6.424			37.03

No. 299.

1901.						
Dec. 18		16	17.604	+ 7	17	57.14
19			.599			56.77
			17.601			56.96

No. 300.

1901.						
Dec. 20		16	24.164	+15	42	35.13
26			.165			35.49
			24.164			35.31

No. 301.

1902.						
Jan. 3		17	9.289	+16	25	23.76
6			.226			23.66
			9.258			23.71

No. 302.

1903.						
Jan. 5		17	17.346	+17	57	57.30
6			.467			57.06
			17.407			57.18

No. 303.

1902.						
Dec. 16		17	58.813	+10	23	24.82
30			.782			24.21
			58.798			24.52

No. 304.

1902.						
Dec. 24		18	17.124	+20	58	8.34
29			.146			7.28
			17.135			7.81

No. 305.

1901.						
Nov. 18		19	1.978	+15	4	34.57
22			2.104			34.44
			2.041			34.50

No. 306.

1901.	h	m	s	°	′	″
Dec. 16	2	19	30.578	+10	9	44.30
17			.525			44.83
			30.551			44.57

No. 307.

1901.						
Dec. 18		20	13.891	+19	50	3.82
19			.927			3.92
			13 909			3.87

No. 308.

1901.						
Dec. 20		20	14.423	+11	31	52.22
26			.400			51.57
			14.412			51.89

No. 309.

1902.						
Jan. 3		20	46.490	+18	27	50.40
6			.413			50.98
			46.451			50.69

No. 310.

1902.						
Dec. 16		21	8.377	+12	27	25.87
30			.370			26.25
			8.373			26.06

No. 311.

1902.						
Dec. 24		21	25.415	+22	26	17.02
29			.471			15.77
			25.443			16.40

No. 312.

1901.						
Nov. 18		22	4.698	+16	11	58.96
22			.730			58.75
			4.714			58.86

No. 313. ξ 2 Ceti.

1901.						
Dec. 16		22	53.677	+ 8	0	58.80
17			.667			59.53
			53.672			59.17
Mean φ (2)				37	20	25.92
1903.						
Jan. 5		23	0.042		1	32.29
6		22	59.996			31.81
		23	0.019			32.05
Mean φ (2)				37	20	25.46

No. 314.

1901.						
Dec. 18		23	10.213	+13	26	3.84
1902.						
Jan. 7			13.474			20.23

	h	m	s	°	′	″
			No. 315.			
1901.						
Dec. 20	2	23	29.132	+15	9	28.32
26			.207			28.39
			29.169			28.36
1902.			**No. 316.**			
Jan. 3		23	45.013	+21	9	24.63
6			.039			24.48
			45.026			24.55
1902.			**No. 317.**			
Dec. 16		24	21.309	+ 9	7	42.11
30			.276			41.03
			21.292			41.57
1902.			**No. 318.**			
Dec. 24		25	8.582	+19	25	13.31
29			.586			12.59
			8.584			12.95
1903.			**No. 319.**			
Jan. 5		25	15.536	+10	37	50.83
6			.559			50.62
			15.547			50.72
1901.			**No. 320.**			
Nov. 18		25	24.804	+17	15	57.28
22			.836			58.16
			24.820			57.72
1901.			**No. 321.**			
Dec. 16		26	45.874	+21	53	45.77
17			.838			45.48
			45.856			45.63
1901.			**No. 322.**			
Dec. 18		26	49.504	+12	14	56.06
19			.462			55.82
			49.483			55.94
1901.			**No. 323.**			
Dec. 20		27	28.670	+14	35	46.64
26			.679			46.74
			28.674			46.69
1902.			**No. 324.**			
Jan. 3		28	7.698	+18	26	52.66
6			.701			52.56
			7.699			52.61

	h	m	s	°	′	″
			No. 325.			
1902.						
Dec. 16	2	29	4.398	+22	32	18.60
30			.398			17.90
			4.398			18.25
1901.			**No. 326.**			
Nov. 18		29	5.097	+11	10	14.13
22			.095			14.03
			5.096			14.08
1901.			**No. 327.**			
Dec. 16		30	12.407	+16	10	44.57
17			.425			44.40
			12.416			44.48
1901.			**Anon. prec.**			
Dec. 18		30	18.273	+13	23	1.17
19			.241			
			18.257			
1901.			**No. 328.**			
Dec. 19		30	37.120	+13	19	22.44
1902.						
Jan. 7			40.372			37.90
1901.			**No. 329.**			
Dec. 20		31	3.096	+22	37	15.83
26			.098			15.24
			3.097			15.53
1902.			**No. 330.**			
Jan. 3		31	11.788	+20	16	27.30
6			.719			27.10
			11.753			27.20
1902.			**No. 331.**			
Dec. 24		31	17.213	+12	1	22.33
29			.245			21.15
			17.229			21.74
1903.			**No. 332.**			
Jan. 5		31	24.760	+24	13	31.84
6			.743			30.56
			24.751			31.20
1902.			**No. 333.**			
Dec. 16		31	23.521	+ 7	18	12.96
30			.494			13.08
			23.508			13.02

	h	m	s	°	′	″
			No. 334.			
1901.						
Nov. 18	2	32	9.816	+22	41	58.27
22			.821			58.49
			9.819			58.38
1901.			**No. 335.** ν **Arietis.**			
Nov. 12		33	11.561	+21	32	0.63
13			.575			0.12
			11.568			0.38
Mean φ (2)				37	20	25.93
1902.						
Dec. 24			14.947	+21	32	16.35
29			.907			16.81
			14.927			16.58
Mean φ (2)				37	20	25.47
1901.			**No. 336.**			
Dec. 16		33	33.540	+14	25	57.53
17			.565			58.04
			33.553			57.78
1901.			**No. 337.**			
Dec. 18		33	42.536	+ 8	29	32.16
19			.490			32.09
			42.513			32.13
1903.			**No. 338.**			
Jan. 5		33	49.975	+10	13	10.36
6			50.016			10.52
			49.996			10.44
1901.			**No. 338a.**			
Dec. 20		35	1.002	+18	10	23.75
26			0.971			24.33
			0.987			24.04
1902.			**No. 339.**			
Jan. 3		35	6.246	+13	6	23.10
6			.210			22.69
			6.228			22.90
1902.			**No. 340.**			
Dec. 16		35	15.782	+15	15	57.76
30			.728			57.10
			15.755			57.43
1901.			**No. 342.**			
Nov. 18		36	46.980	+19	35	22.68
22			.968			22.97
			46.974			22.83

	No. 343.					
1901.	h	m	s	°	′	″
Dec. 16	2	36	50.639	+16	32	10.20
17			.629			10.82
			50.634			10.51
1901.	**No. 344.**					
Dec. 18		37	9.092	+10	19	10.95
19			.058			11.23
			9.075			11.09
1901.	**No. 345.**					
Dec. 20		38	47.500	+17	20	42.08
26			.504			42.39
			47.502			42.24
1902.	**No. 346.**					
Dec. 24		39	8.838	+14	53	49.96
29			.840			49.26
			8.839			49.61
1902.	**No. 347.**					
Jan. 3		39	37.126	+12	2	0.87
6			.135			0.75
			37.130			0.81
1901.	**No. 348.** *μ* **Ceti.**					
Nov. 12		39	35.402	+ 9	41	46.33
13			.383			46.60
			35.393			46.46
Mean φ (2)				37	20	26.34
1902.	**No. 349.**					
Dec. 16		39	40.099	+13	49	27.29
30			.115			26.98
			40.107			27.13
1901.	**No. 349a.**					
Dec. 18		40	12.711	+16	36	11.02
19			.660			11.14
			12.686			11.08
1901.	**No. 349b.**					
Nov. 18		40	46.935	+18	25	16.06
22			.878			16.40
			46.906			16.23
1902.	**No. 350.**					
Dec. 24		41	38.355	+22	33	0.21
29			.325		32	59.01
			38.340		32	59.61

	No. 351.					
1901.	h	m	s	°	′	″
Dec. 16	2	41	49.926	+20	55	50.27
17			.940			50.51
			49.933			50.39
1903.	**No. 352.**					
Jan. 5		41	58.784	+18	58	11.38
6			.856			11.03
			58.820			11.20
1901.	**No. 353.**					
Dec. 20		42	4.783	+ 8	53	39.82
26			.825			39.91
			4.804			39.86
1902.	**No. 354.**					
Jan. 3		42	47.667	+19	36	3.09
6			.541			3.00
			47.604			3.04
1902.	**No. 355.**					
Dec. 16		43	2.302	+17	52	33.12
30			.283			32.12
			2.292			32.62
1903.	**No. 356.**					
Jan. 5		43	42.569	+17	3	39.87
6			.644			38.45
			42.606			39.16
1901.	**No. 357.**					
Nov. 18		44	29.801	+12	14	43 68
22			.786			43.96
			29.793			43.82
1901.	**No. 358.**					
Dec. 16		44	47.209	+13	18	0.54
17			.153			0.41
			47.181			0.48
1901.	**No. 359.**					
Dec. 18		44	54.161	+21	42	15.90
19			.100			15.90
			54.131			15.90
1902.	**No. 360.**					
Dec. 24		44	59.589	+11	12	33.55
29			.572			32.57
			59.580			33.06

	No. 361.					
1901.	h	m	s	°	′	″
Dec. 20	2	45	6.674	+18	45	9.01
26			.706			9.03
			6.690			9.02
1902.	**No. 362.** *σ* **Arietis.**					
Jan. 3		46	4.804	+14	40	41.93
6			.813			41.95
Dec. 16			.776			42.78
30			.858			42.43
			4.813			42.27
Mean φ (4)				37	20	25.58
1903.						
Jan. 8			8.150			55.78
10			.139			56.68
			8.144			56.23
Mean φ (2)				37	20	26.95
1901.	**No. 363.**					
Nov. 18		47	40.849	+16	4	45.90
22			.864			46.05
			40.856			45.98
1901.	**No. 364.**					
Dec. 16		48	40.027	+20	9	42.56
17			39.983			42.78
			40.005			42.67
1901.	**No. 365.**					
Dec. 18		48	58.882	+10	54	21.19
19			.831			21.19
			58.856			21.19
1901.	**No. 366.**					
Dec. 20		49	5.578	+ 9	22	9.01
26			.600			9.13
			5.589			9.07
1903.	**No. 367.**					
Jan. 5		49	19.660	+12	32	40.41
6			.661			39.97
			19.661			40.19
1902.	**No. 368.**					
Dec. 16		50	1.257	+22	12	24.27
1903.						
Jan. 8			4.583			38.44
1902.	**No. 369.**					
Dec. 24		50	15.916	+14	18	35 56
29			.942			34.76
			15.929			35.16

	h	m	s	°	′	″
No. 370.						
1902.						
Jan. 3	2	50	17.976	+17	56	4.35
6			.941			4.51
			17.958			4.43
1901. **No. 371.**						
Nov. 18		50	50.766	+17	37	41.55
22			.738			42.43
			50.752			41.99
1901. **No. 372.**						
Dec. 16		51	57.536	+15	53	45.94
17			.503			45.81
			57.520			45.88
1901. **No. 373.**						
Dec. 18		52	25.177	+20	16	18.44
19			.108			18.80
			25.142			18.62
1902. **No. 374.**						
Dec. 16		52	54.503	+23	44	28.73
30			.454			27.24
			54.478			27.99
1902. **No. 375.**						
Jan. 3		53	15.886	+21	13	32.83
6			.868			32.77
			15.877			32.80
1903. **No. 376.**						
Jan. 5		53	25.809	+13	13	5.51
10			.849			5.65
			25.829			5.58
1902. **No. 377.**						
Dec. 24		53	36.032	+19	35	55.26
29			.114			54.42
			36.073			54.84
1901. **No. 378. ε Arietis.**						
Dec. 20		53	33.004	+20	56	40.12
26			32.934			40.21
			32.969			40.16
Mean φ (2)				37	20	25.69
1901. **No. 379.**						
Nov. 18		54	53.491	+22	26	5.46
22			.530			6.21
			53.511			5.83

	h	m	s	°	′	″
No. 380.						
1901.						
Dec. 16	2	54	57.491	+17	36	43.55
17			.522			43.54
			57.506			43.55
1901. **No. 381.**						
Dec. 18		55	21.856	+10	28	40.57
19			.891			41.29
			21.873			40.93
1902. **No. 382.**						
Jan. 3		55	28.463	+14	38	38.72
6			.444			38.80
			28.453			38.76
1902. **No. 383.**						
Dec. 16		55	37.682	+19	..	....
30			.748		0	53.36
			37.715			
1903.						
Jan. 8			41.034		1	8.33
1901. **No. 384.**						
Dec. 20		57	20.087	+17	10	34.10
26			.079			34.53
			20.083			34.31
1901. **No. 385.**						
Nov. 18		57	44.044	+22	40	21.22
22			.039			21.22
			44.041			21.22
1901. **No. 386.**						
Dec. 16		58	5.382	+14	4	59.24
17			.365			59.16
			5.373			59.20
1902. **No. 387.**						
Dec. 14		59	13.373	+15	28	33.25
29			.414			32.95
			13.394			33.10
1902. **No. 388.**						
Jan. 3		59	41.723	+24	52	26.95
6			.628			26.29
			41.675			26.62
1903. **No. 389.**						
Jan. 5		59	56.885	+20	31	32.83
6			.905			32.00
			56.895			32.42

	h	m	s	°	′	″
No. 390.						
1902.						
Dec. 24	3	0	56.721	+11	17	9.35
29			.683			8.45
			56.702			8.90
1901. **No. 391. Lal. 5724.**						
Nov. 18		0	57.522	+12	48	18.89
22			.495			19.37
			57.509			19.13
Mean φ (2)				37	20	25.89
1902.						
Jan. 7		1	0.835			33.61
9			.775			33.18
10			.793			33.50
28			.788			33.28
Dec. 16			.800			33.56
30			.811			33.54
			0.800			33.44
Mean φ (6)				37	20	25.82
1903.						
Jan. 8			4.116	+12	48	47.39
Mean φ (1)				37	20	26.77
1901. **No. 392.**						
Dec. 16		1	51.182	+17	29	53.08
17			.210			53.05
			51.196			53.06
1901. **No. 393.**						
Dec. 18		2	6.205	+23	18	29.01
19			.162			29.24
			6.183			29.13
1901. **No. 394.**						
Dec. 20		2	44.343	+18	24	54.34
26			.330			53 09
			44.337			53.72
1902. **No. 395.**						
Jan. 10		3	16.996	+14	57	52.14
28			.951			51.28
			16.974			51.71
1902. **No. 396.**						
Jan. 7		3	42.878	+20	23	11.73
9			.871			11.97
			42.875			11.85
1902. **No. 397.**						
Dec. 30		5	0.777	+21	31	19.77
1903.						
Jan. 3			4.284			34.22

No. 398.

1901.	h	m	s	°	′	″
Dec. 18	3	5	17.431	+13	58	5.47
19			.350			5.46
			17.391			5.47

No. 399.

1902.	h	m	s	°	′	″
Jan. 3		5	58.940	+12	40	34.86
6			.892			35.04
			58.916			34.95

No. 400. δ Arietis.

1901.	h	m	s	°	′	″
Dec. 16		5	57.985	+19	21	8.83
17			.999			8.51
20			.984			8.90
26			.966			8.84
30			.994			8.62
			57.986			8.74
Mean φ (5)				37	20	25.89
1902.						
Dec. 24		6	1.412	+19	21	22.84
29			.337			22.14
			1.374			22.49
Mean φ (2)				37	20	26.19

No. 401.

1902.	h	m	s	°	′	″
Jan. 7		6	55.495	+16	8	52.43
9			.512			52.21
			55.504			52.32

No. 402.

1902.	h	m	s	°	′	″
Jan. 3		8	16.889	+23	53	55.59
6			.936			55.42
			16.912			55.50

No. 403.

1901.	h	m	s	°	′	″
Dec. 18		8	17.150	+18	36	9.21
19			.122			9.21
			17.136			9.21

No. 404.

1902.	h	m	s	°	′	″
Jan. 10		8	34.810	+22	35	16.17
28			.812			16.43
			34.811			16.30

No. 405.

1902.	h	m	s	°	′	″
Dec. 30		8	40.380	+15	13	27.81
1903.						
Jan. 8			43.727			42.05

No. 406.

1901.	h	m	s	°	′	″
Dec. 16	3	9	10.222	+17	39	34.69
17			.214			34.93
			10.218			34.81

No. 407.

1901.	h	m	s	°	′	″
Dec. 20		9	12.531	+20	40	39.08
30			.595			39.54
			12.563			39.31

No. 408.

1902.	h	m	s	°	′	″
Jan. 7		10	40.924	+11	15	56.70
9			.957			56.94
			40.941			56.82

No. 409.

1901.	h	m	s	°	′	″
Dec. 18		11	40.621	+21	55	8.89
19			.556			9.06
			40.588			8.98

No. 410.

1902.	h	m	s	°	′	″
Jan. 3		12	17.627	+24	31	11.22
6			.627			10.99
			17.627			11.10

No. 411.

1902.	h	m	s	°	′	″
Jan. 10		12	27.335	+13	29	15.93
28			.358			15.49
			27.346			15.71

No. 412.

1901.	h	m	s	°	′	″
Dec. 20		12	56.060	+14	49	22.04
30			.090			22.13
			56.075			22.09

No. 413.

1901.	h	m	s	°	′	″
Dec. 16		13	47.582	+12	5	29.81
17			.606			29.62
			47.594			29.71

No. 414.

1902.	h	m	s	°	′	″
Jan. 7		14	12.601	+18	43	13.24
9			.607			13.01
			12.604			13.12

No. 415.

1902.	h	m	s	°	′	″
Dec. 30		14	14.579	+19	55	16.65
1903.						
Jan. 8			18.001			30.23

No. 416.

1902.	h	m	s	°	′	″
Dec. 24	3	14	26.850	+17	8	38.80
29			.936			37.68
			26.893			38.24

No. 417.

1901.	h	m	s	°	′	″
Dec. 18		14	33.100	+23	19	54.87
19			.121			53.81
			33.111			54.34

No. 418. τ Arietis.

1902.	h	m	s	°	′	″
Jan. 3		15	34.036	+20	47	38.10
6			.053			38.42
10			.020			38.38
28			.046			38.21
			34.039			38.28
Mean φ (4)				37	20	25.91
1903.						
Jan. 5			37.492			52.11
6			.510			51.23
10			.493			51.71
			37.498			51.68
Mean φ (3)				37	20	25.39

No. 419.

1901.	h	m	s	°	′	″
Dec. 16		17	3.297	+20	23	16.64
17			.266			16.87
			3 281			16.76

No. 420.

1901.	h	m	s	°	′	″
Dec. 18		17	44.778	+16	12	48.20
19			.747			47.39
			44.762			47.80

No. 421.

1901.	h	m	s	°	′	″
Dec. 20		18	20.101	+19	33	16.99
30			.128			17.15
			20.115			17.07

No. 422.

1902.	h	m	s	°	′	″
Jan. 3		18	31.130	+24	22	38.16
6			.147			38.23
			31.139			38.19

No. 424.

1902.	h	m	s	°	′	″
Jan. 10		18	46.500	+12	16	55.53
28			.545			54.82
			46.522			55.17

	h	m	s	°	′	″
			No. 423.			
1902.						
Jan. 7	3	18	46.945	+20	27	21.47
9			.965			21.19
			46.955			21.33
1902.			**No. 425.**			
Dec. 30		18	52.652	+21	41	34.92
1903.						
Jan. 12			56.119			47.73
1902.			**No. 426.**			
Dec. 24		19	16.789	+14	37	36.32
29			.824			36.24
			16.806			36.28
1901.			**No. 427.**			
Dec. 20		19	47.155	+17	23	46.70
30			.128			47.67
			47.142			47.18
1901.			**No. 428.**			
Dec. 16		19	54.543	+13	44	17.92
17			.515			17.89
			54.529			17.91
1901.			**No. 429.**			
Dec. 18		21	24.083	+18	24	36.02
19			.031			35.99
			24.057			36.01
1902.			**No. 430.**			
Jan. 3		22	3.009	+23	50	29.27
6			.013			29.46
			3.011			29.36
1902.			**No. 431.**			
Jan. 7		22	42.758	+22	27	59.23
9			.726			59.32
			42.742			59.27
1902.			**No. 432.**			
Jan. 10		23	8.733	+20	17	4.35
28			.740			4.63
			8.736			4.49
1902.			**No. 433.**			
Dec. 30		23	30.005	+14	39	28.52
1903.						
Jan. 8			33.332			40.93

	h	m	s	°	′	″
			No. 434.			
1901.						
Dec. 16	3	24	7.252	+16	25	16.74
17			.208			16.94
			7.230			16.84
1901.			**No. 434a.**			
Dec. 20		24	47.279	+19	45	52.65
30			.311			53.14
			47.295			52.90
1902.			**No. 435.**			
Jan. 3		25	26.239	+24	55	17.33
6			.220			17.43
			26.229			17.38
1901.			**No. 436. f Tauri.**			
Dec. 18		25	24.384	+12	35	50.43
19			.358			50.48
			24.371			50.45
Mean φ (2)				37	20	26.70
1902.						
Feb. 4			27.710		36	3.63
Dec. 24			.682			3.70
29			.636			3.64
			27.676			3.66
Mean φ (3)				37	20	26.29
1903.						
Jan. 5			31.011			15.29
6			.032			15.56
10			.021			15.93
			31.021			15.59
Mean φ (3)				37	20	26.40
1902.			**No. 438.**			
Jan. 7		25	45.935	+21	29	18.13
9			46.026			18.19
			45.980			18.16
1902.			**No. 439.**			
Dec. 30		25	46.899	+17	36	11.91
1903.						
Jan. 8			50.332			24.40
1902.			**No. 440.**			
Jan. 10		26	14.077	+23	18	49.03
28			.075			49.33
			14.076			49.18
1901.			**No. 441.**			
Dec. 16		27	20.365	+15	12	46.25
17			.367			46.26
			20.366			46.25

	h	m	s	°	′	″
			No. 442.			
1901.						
Dec. 20	3	27	51.541	+13	26	54.70
30			.560			54.79
			51.550			54.75
1901.			**No. 443.**			
Dec. 18		28	34.696	+24	7	57.61
19			.701			57.70
			34.699			57.66
1902.			**No. 444.**			
Jan. 3		29	41.601	+18	34	36.39
6			.659			36.58
			41.630			36.48
1902.			**No. 445.**			
Dec. 30		30	44.450	+19	44	36.78
1903.						
Jan. 8			47.854			49.03
1901.			**No. 446.**			
Jan. 7		31	12.131	+22	53	14.44
9			.141			13.95
			12.136			14.19
1902.			**No. 447.**			
Jan. 10		31	54.949	+23	56	15.74
28			.950			15.66
			54.919			15.70
1902.			**No. 448.**			
Dec. 24		32	17.706	+15	6	31.73
29			.691			31.01
			17.698			31.37
1901.			**No. 449.**			
Dec. 16		32	52.000	+22	20	10.79
17			.022			10.30
			52.011			10.55
1901.			**No. 450.**			
Dec. 18		33	15.245	+20	35	34.68
19			.219			34.77
			15.232			34.72
1901.			**No. 451.**			
Dec. 20		33	46.478	+13	34	16.07
30			.542			16.20
			46.510			16.13

No. 452. P III 103.

	h	m	s	°	′	″
1902.						
Jan. 7	3	33	53.104	+16	13	4.92
9			.163			5.07
			53.133			4.99
Mean φ (2)				37	20	25.90

No. 453.

1902.						
Jan. 6		33	56.200	+18	4	14.61
Feb. 4			.215			14.53
			56.208			14.57

No. 454.

1902.						
Jan. 10		34	54.953	+25	0	45.67
28			55.015			45.92
			54.984			45.80

No. 455. 13 Tauri.

1901.						
Dec. 20		36	36.257	+19	22	59.83
30			.291			60.33
			36.274		23	0.08
Mean φ (2)				37	20	25.80

No. 456.

1901.						
Dec. 16		36	39.730	+14	28	28.81
17			.726			29.04
			39.728			28.92

No. 457.

1901.						
Dec. 18		37	0.077	+16	58	33.74
19			.062			33.61
			0.069			33.67

No. 458.

1902.						
Dec. 30		38	7.070	+19	21	19.14
1903.						
Jan. 8			10.542			31.54

No. 459.

1902.						
Jan. 3		38	45.940	+20	37	9.33
6			.963			9.36
			45.952			.934

No. 460.

1902.						
Jan. 7		38	58.567	+23	58	53.11
9			.604			52.84
			58.586			52.97

No. 461. 17 Tauri.

	h	m	s	°	′	″
1902.						
Jan. 10	3	39	3.291	+23	48	19.56
28			.260			19.57
			3.275			19.56
Mean φ (2)				37	20	25.78
1903.						
Jan. 5			6.827			31.12
10			.795			31.29
			6.811			31.20
Mean φ (2)				37	20	25.19

No. 462.

1901.						
Dec. 20		39	15.211	+24	31	43.23
30			.136			43.36
			15.174			43.30

No. 463.

1901.						
Dec. 16		39	18.784	+24	9	24.94
17			.813			24.96
			18.798			24.95

No. 464.

1901.						
Dec. 18		39	50.185	+22	23	5.85
19			.170			5.42
			50.178			5.63

No. 465.

1902.						
Dec. 24		39	59.580	+24	3	41.84
29			.614			41.66
			59.597			41.75

No. 466.

1902.						
Jan. 3		40	23.707	+18	15	36.95
6			.748			36.65
			23.727			36.80

No. 467.

1902.						
Jan. 7		40	30.438	+23	38	35.76
9			.504			35.66
			30.471			35.71

No. 468.

1902.						
Jan. 10		40	59.167	+13	12	14.46
28			.178			14.92
			59.173			14.69

No. 469. η Tauri.

	h	m	s	°	′	″
1902.						
Dec. 30	3	41	39.434	+23	48	7.93
Mean φ (1)				37	20	25.87
1903.						
Jan. 8			42.961			20.16
14			.991			20.31
			42.976			20.23
Mean φ (2)				37	20	25.68

No. 470.

1902.						
Dec. 24		42	0.738	+16	24	9.28
29			.793			8.04
			0.766			8.66

No. 471.

1901.						
Dec. 16		43	4.451	+15	12	3.66
17			4.70			3.31
			4.460			3.48

No. 472.

1901.						
Dec. 18		43	16.408	+23	45	3.45
19			.399			3.11
			16.404			3.28

No. 473.

1901.						
Dec. 20		43	17.709	+23	50	2.99
30			.724			2.94
			17.717			2.97

No. 474.

1902.						
Jan. 3		44	4.199	+20	51	39.35
6			.193			39.93
			4.196			39.64

No. 475.

1902.						
Jan. 7		44	9.265	+21	56	46.47
9			.315			46.44
			9.290			46.46

No. 476.

1902.						
Jan. 10		44	15.155	+19	16	3.68
28			.146			3.90
			15.150			3.79

No. 477.

1902.						
Dec. 30		44	25.252	+25	17	1.96
1903.						
Jan. 8			28.929			13.70

No. 478.

1902.	h	m	s	°	′	″
Dec. 24	3	45	51.140	+21	44	11.72
29			.110			11.00
			51.125			11.36

No. 479.

1901.						
Dec. 16		46	41.794	+18	18	4.72
17			.848			4.74
			41.821			4.73

No. 480.

1901.						
Dec. 18		47	22.960	+14	5	11.43
19			.984			11.36
			22.972			11.40

No. 481.

1901.						
Dec. 20		47	29.510	+22	49	40.64
30			.533			41.14
			29.521			40.89

No. 482. Mayer 136.

1902.						
Jan. 3		47	33.683	+17	2	7.02
6			.720			6.90
7			.694			7.05
9			.709			7.61
			33.701			7.15
Mean φ (4)				37	20	26.47
1903.						
Jan. 14			37.121			18.74
Mean φ (1)				37	20	25.76

No. 483.

1902.						
Jan. 10		47	40.288	+25	23	31.16
28			.246			30.95
			40.267			31.05

No. 484.

1902.						
Dec. 30		48	17.663	+14	53	36.28
1903.						
Jan. 8			21.014			47.56

No. 485.

1902.						
Dec. 24		48	52.498	+16	19	50.57
29			.590			49.74
			52.544			50.16

No. 486.

1901.						
Dec. 16		51	0.985	+22	11	34.55
17			.958			33.88
			0.971			34.21

No. 487.

1901.	h	m	s	°	′	″
Dec. 18	3	51	7.608	+19	47	45.77
19			.530			45.31
			7.569			45.54

No. 488.

1901.						
Dec. 20		51	11.515	+22	53	17.34
30			.562			17.69
			11.539			17.52

No. 489.

1902.						
Jan. 7		51	22.673	+18	33	19.60
9			.693			18.93
			22.683			19 26

No. 490.

1902.						
Jan. 10		51	26.894	+21	2	21.44
28						22.18
						21.81
1903.						
Jan. 14			30.408			32.73

No. 491.

1902.						
Dec. 30		51	34.649	+24	10	41.29
1903.						
Jan. 8			38.262			52.66

No. 492.

1902.						
Dec. 24		53	6.888	+26	55	1.34
29			.906			0.80
			6.897			1.07

No. 493.

1901						
Dec. 16		53	47.591	+13	41	37.78
17			.551			37.80
			47.571			37.79

No. 494.

1901.						
Dec. 18		54	57.453	+17	1	1.55
19			.437			1.28
			57.445			1 42

No. 495.

1901.						
Dec. 20		55	3.905	+22	55	21.83
30			.934			21.57
			3.919			21.70

No. 496.

1902.						
Jan. 3		55	9.928	+17	55	3.75
6			.951			3.76
			9.939			3.75

No. 497.

1902.	h	m	s	°	′	″
Jan. 7	3	55	12.745	+15	11	57.15
9			.724			57.40
			12.734			57.28

No. 498.

1902.						
Jan. 10		55	24.343	+19	55	29.40
28						29.54
						29.47
1903.						
Jan. 14			27.900			39.81

No. 499.

1902.						
Feb. 4		55	59.694	+25	38	56.62
1903.						
Jan. 15		56	3.257		39	7.06

No. 500.

1902.						
Jan. 10		58	29.905	+23	50	11.20
28						11.48
						11.34
1903.						
Jan. 14			33.482			21.61

No. 501. A Tauri.

1901.						
Dec. 16		58	50.469	+21	48	41.87
17			.449			41.49
18			.467			41.31
19			.457			41.41
			50.461			41.52
Mean φ (4)				37	20	25.98
1902.						
Dec. 24			54.021			51.95
29			.044			51.36
30			53.975			51.94
			54.013			51.75
Mean φ (3)				37	20	25.83
1903.						
Jan. 5			57.524		49	1.54
8			.521			2.59
10			.523			1.74
16			.547			1.61
Feb. 10			.490			2.12
16			.509			1.87
17			.514			1.96
			57.518			1.92
Mean φ (7)				37	20	25.81
Dec. 14			.542			2.15
21			.512			2.47
22			.496			1.46
24			.553			1.93
			57.526			2.00
Mean φ (4)				37	20	25.26

	h	m	s	°	'	"
			No. 502.			
1901.						
Dec. 20	3	58	59.542	+17	14	44.29
30			.572			44.00
			59.557			44.14
1902.			**No. 503.**			
Jan. 3		59	32.096	+21	44	40.51
6			.027			40.76
			32.061			40.63
1902.			**No. 504.**			
Jan. 7		59	54.346	+19	41	16.25
9			.401			16.52
			54.373			16.38
1902.			**No. 505.**			
Feb. 4	4	0	7.778	+25	56	45.62
1903.						
Jan. 15			11.389			55.82
1902.			**No. 506.**			
Dec. 24		0	35.595	+27	20	10.24
29			.685			9.58
			35.640			9.91
1902.			**No. 507.**			
Jan. 3		0	56.552	+18	53	10.21
6			.451			10.10
			56.501			10.15
1902.			**No. 508.**			
Jan. 7		1	22.786	+20	59	56.29
9			.839			55.96
			22.812			56.12
1901.			**No. 509.**			
Dec. 20		2	5.745	+14	53	51.77
30			.757			52.38
			5.751			52.08
1902.			**No. 510.**			
Jan. 10		2	19.736	+16	16	6.89
1903.						
Jan. 14			23.157			17.35
1903.			**No. 511.**			
Feb. 16		2	26.039	+17	4	50.54
17			.052			50.61
			26.045			50.57

	h	m	s	°	'	"
			No. 512.			
1903.						
Dec. 14	4.	3	3.195	+23	36	48.50
21			.225			49.12
			3.210			48.81
1903.			**No. 513. S. p.**			
Dec. 22		3	7.059	+22	50	24.11
24			.032			24.65
			7.046			24.38
1903.			**No. 513. N. f.**			
Dec. 28		3	7.046	+22	50	29.79
29			.075			29.28
			7.060			29.53
1902.			**No. 514. 43 Tauri.**			
Feb. 4		3	27.374	+19	21	1.55
Mean φ (1)				37	20	25.68
1903.						
Jan. 15			30.825			11.05
16			.828			10.69
Feb. 10			.807			11.05
			30.820			10.93
Mean φ (3)				37	20	25.49
1902.			**No. 515.**			
Jan. 7		4	40.258	+25	6	22.17
9			.308			22.63
			40.283			22.40
1902.			**No. 516.**			
Jan. 3		4	51.687	+26	13	31.24
6			.583			31.07
			51.635			31.16
1901.			**No. 517.**			
Dec. 20		4	58.670	+18	9	53.31
30			.693			53.68
			58.682			53.50
1902.			**No. 518.**			
Jan. 10		5	21.242	+15	41	27.67
1903.						
Jan. 10			24.644			37.94
1903.			**No. 519.**			
Jan. 16		6	28.103	+21	17	7.79
Feb. 10			.072			7.78
			28.087			7.78

	h	m	s	°	'	"
			No. 520.			
1903.						
Feb. 16	4	6	57.466	+17	1	40.30
17			.459			40.64
			57.462			40.47
1903.			**No. 521.**			
Dec. 14		7	6.017	+22	9	51.69
21			.108			51.83
			6.063			51.76
1903.			**No. 522.**			
Dec. 22		8	32.417	+27	42	50.58
24			.400			50.44
			32.408			50.51
1901.			**No. 523.**			
Dec. 20		8	30.815	+23	26	38.40
30			.847			38.88
			30.831			38.64
1902.			**No. 524.**			
Jan. 3		8	38.559	+19	19	55.83
6			.544			55.64
			38.551			55.73
1902.			**No. 525.**			
Jan. 7		10	12.390	+15	9	19.82
9			.414			20.30
			12.402			20.06
1902.			**No. 526.**			
Jan. 10		11	31.034	+20	20	14.96
1903.						
Jan. 14			34.535			24.37
1902.			**No. 527.**			
Feb. 4		12	21.419	+18	1	0.07
1903.						
Jan. 15			24.890			9.13
1903.			**No. 528.**			
Jan. 16		12	27.930	+22	34	10.01
Feb. 10			.910			10.31
			27.920			10.16
1903.			**No. 529.**			
Feb. 16		12	35.784	+24	45	58.88
17			.750			58.63
			35.767			58.76

No. 530.

	h m s	° ′ ″
1903.		
Dec. 14	4 12 38.679	+21 20 33.22
21	.721	33.18
	38.700	33.20

1901. No. 531.

Dec. 20	13 35.914	+20 54 10.73
30	.904	10.67
	35.909	10.70

1902. No. 532.

Jan. 3	13 48.550	+21 32 12.45
6	.558	12.80
	48.554	12.63

1902. No. 533. γ Tauri.

Jan. 7	14 12.921	+15 23 28.02
9	.943	27.95
	12.932	27.98
Mean φ (2)		37 20 26.37
1903.		
Dec. 28	16.304	36.89
29	.305	36.76
	16.304	36.82
Mean φ (2)		37 20 25.96

1902. No. 534.

Feb. 4	14 18.218	+16 17 11.83
1903.		
Jan. 15	21.661	20.30

1902. No. 535. φ Tauri.

Jan. 10	14 19.534	+27 6 58.44
φ		37 20 26.30
1903.		
Jan. 14	23.176	7 8.00
φ		37 20 25.75

1903. No. 536.

Dec. 22	14 46.889	+18 30 36.99
24	.823	36.36
	46.856	36.67

1903. No. 537.

Jan. 16	15 6.229	+14 51 46.74
Feb. 10	.298	47.28
	6.264	47.01

1901. No. 538.

Dec. 20	16 33.412	+25 23 44.83
30	.383	45 44
	33.397	45.14

No. 539.

	h m s	° ′ ″
1902.		
Jan. 3	4 16 36.789	+20 35 22.73
6	.776	22.65
	36.782	22.69

1903. No. 540. δ Tauri.

Feb. 16	17 20.384	+17 18 55.07
17	.411	55.15
	20.397	55.11
Mean φ (2)		37 20 26.01
Dec. 28	17 20.383	+17 18 55.11
29	.377	55.06
	20.380	55.09
Mean φ (2)		37 20 25.54

1902. No. 541.

Jan. 7	17 45.781	+20 45 13.68
9	.817	13.48
	45.799	13.58

1903. No. 542.

Dec. 22	17 51.060	+16 33 3.88
24	.053	3.20
	51.056	3.54

1903. No. 543.

Dec. 14	18 8.814	+24 4 31.25
21	.802	31.97
	8.808	31.61

1902. No. 544.

Jan. 10	18 26.777	+17 13 1.31
1903.		
Jan. 14	30.180	10.64

1902. No. 545.

Feb. 4	19 12.049	+25 31 26.29
1903.		
Jan. 15	15.749	34.38

1903. No. 546.

Feb. 16	19 17.886	+18 49 9.04
17	.862	9.03
	17.874	9.04

1901. No. 547.

Dec. 20	19 28.020	+22 4 2.86
30	.066	3.06
	28.043	2.96

No. 548.

	h m s	° ′ ″
1902.		
Jan. 3	4 19 34.612	+21 58 33.66
6	.670	33.70
	34.641	33.68

1903. No. 549.

Jan. 16	19 52.664	+17 42 22.88
Feb. 10	.605	23.26
	52.635	23.07

1903. No. 550.

Dec. 14	20 30.189	+22 35 37.77
21	.144	38.11
	30.166	37.94

1903. No. 551.

Dec. 22	20 49.143	+15 23 54.35
24	.075	53.51
	49.109	53.93

1902. No. 552.

Jan. 7	21 4.075	+14 29 32.15
9	.127	31.38
	4 101	31.76

1902. No. 553.

Jan. 10	21 25.731	+22 46 32.19
1903.		
Jan. 14	29.338	40.41

1902. No. 554.

Feb. 4	22 11.696	+21 24 4.81
1903.		
Jan. 15	15.242	13.45

1903. No. 555.

Jan. 16	22 53.648	+16 8 34.70
Feb. 10	.661	34.91
	53.654	34.80

1901. No. 556. ε Tauri.

Dec. 20	22 50.074	+18 57 39.36
30	.112	39.40
	50.093	39.38
Mean φ (2)		37 20 26.04

1902. No. 557.

Jan. 3	22 55.965	+20 27 34.62
6	.885	34.29
	55.925	34.45

No. 558.

1903.	h	m	s	°	′	″
Feb. 16	4	23	1.898	+15	44	48.84
17			.920			48.87
			1.909			48.86

No. 559.

1903.						
Dec. 22		23	7.395	+15	39	21.64
24			.365			21.21
			7.380			21.42

No. 560.

1903.						
Dec. 14		23	20.284	+27	11	24.57
21			.282			25.05
			20.283			24.81

No. 561.

1902.						
Jan. 7		23	23.316	+15	56	33.51
9			.372			33.04
			23.344			33.27

No. 562.

1902.						
Jan. 10		24	13.762	+27	54	56.50
1903.						
Jan. 14			17.502		55	4.80

No. 563.

1901.						
Dec. 20		24	25.272	+23	22	19.20
30			.237			19.93
			25.254			19.56

No. 564.

1902.						
Jan. 3		24	33.286	+15	25	25.91
6			.236			25.83
			33.261			25.87

No. 565.

1902.						
Feb. 4		24	57.093	+15	58	50.90
1903.						
Jan. 15		25	0.442			59.24

No. 566.

1903.						
Jan. 16		25	6.910	+15	28	52.12
Feb. 10			.843			51.83
			6.876			51.97

No. 567.

1903.						
Feb. 16		26	19.262	+15	38	37.04
17			.247			37.15
			19.254			37.10

No. 568.

1903.	h	m	s	°	′	″
Dec. 14	4	26	27.746	+24	58	41.77
21			.774			42.77
			27.760			42.27

No. 569.

1903.						
Dec. 22		27	56.004	+17	48	44.37
24			55.996			43.69
			56.000			44.03

No. 570.

1901.						
Dec. 20		28	26.176	+28	45	14.73
30			.235			14.88
			26.206			14.80

Anon.

1902.						
Jan. 7		28	47.805	+20	54	6.57
1903.						
Jan. 15			51.403			13.88

No. 571.

1902.						
Jan. 10		28	53.561	+22	29	17.47
1903.						
Jan. 14			57.101			25.27

No. 572.

1902.						
Jan. 9		28	58.916	+20	53	58.58
Feb. 4			.834			58.57
			58.875			58.58

No. 572a.

1902.						
Jan. 3		29	1 997	+17	32	40.09
6			2.012			39.90
			2.004			40.00

No. 573.

1903.						
Jan. 16		30	1.360	+19	40	54.64
Feb. 20			.324			54.47
			1.342			54.55
Dec. 28			.316			54.45
29			.338			54.44
			1.327			54.45

No. 574. *α* Tauri.

1903.						
Dec. 14		30	21.234	+16	18	51.35
21			.212			51.73
			21.223			51.54
Mean φ (2)				37	20	26.27

No. 575.

1903.	h	m	s	°	′	″
Dec. 22	4	30	38.508	+23	8	36.08
24			.552			36.02
			38.530			36.05

No. 575a.

1902.						
Jan. 7		30	43.230	+26	56	8.11
9			.262			7.92
			43.246			8.02

No. 576.

1903.						
Feb. 16		31	7.421	+27	43	41.41
17			.457			41.62
			7.439			41.52

No. 576a.

1901.						
Dec. 20		31	21.108	+25	31	36.71
30			.071			37.13
			21.089			36.92

No. 577.

1903.						
Jan. 16		31	36.551	+18	20	46.05
Feb. 10			.451			46.07
			36.501			46.06

No. 579.

1902.						
Jan. 3		32	28.913	+20	29	17.01
6			.825			16.79
			28.869			16.90

No. 580.

1902.						
Jan. 10		32	32.795	+15	50	13.05
1903.						
Jan. 14			36.207			20.46

No. 581.

1903.						
Dec. 14		33	28.185	+25	1	33.32
21			.169			33.32
			28.177			33.32

No. 582.

1902.						
Jan. 7		33	33.407	+15	36	24.70
9			.435			25.02
			33.421			24.86

No. 583.

1902.						
Feb. 4		33	40.068	+15	43	26.78
1903.						
Jan. 15			43.525			33.67

No. 584.

1903.	h	m	s	°	′	″
Feb. 16	4	34	16.203	+17	17	53.75
17			.240			53.41
			16.222			53.58
1901.			**No. 585.**			
Dec. 20		35	7.872	+28	25	23.50
30			.892			23.60
			7.882			23.55
1903.			**No. 586.**			
Jan. 16		36	13.808	+21	19	19.96
Feb. 10			.813			20.53
			13.810			20.24
1902.			**No. 587. τ Tauri.**			
Jan. 3		36	21.772	+22	46	9.28
6			.730			8.70
			21.751			8.99
Mean φ (2)				37	20	25.90
1903.						
Feb. 20			25.290			16.14
Mean φ (1)				37	20	25.67
Dec. 22			25.315			16.50
24			.295			16.29
			25.305			16.39
Mean φ (2)				37	20	25.09
1902.			**No. 588.**			
Jan. 10		37	8.336	+18	32	10.67
1903.						
Jan. 14			11.859			17.10
1902.			**No. 589.**			
Feb. 4		37	17.686	+23	54	12.19
1903.						
Jan. 15			21.376			19.60
1903.			**No. 590.**			
Feb. 16		37	22.249	+20	26	42.82
17			.213			42.46
			22.231			42.64
1903.			**No. 591.**			
Dec. 14		37	22.615	+17	7	36.32
21			.650			36.55
			22.632			36.43

No. 592.

1902.	h	m	s	°	′	″
Jan. 7	4	37	29.523	+27	30	33.10
9			.505			33.25
			29.514			33.17
1901.			**No. 593.**			
Dec. 20		39	43.715	+23	26	45.22
30			.807			45.84
			43.761			45.53
1902.			**No. 594.**			
Jan. 3		40	10.718	+25	51	25.23
6			.689			25.19
			10.703			25.21
1902.			**No. 595.**			
Jan. 10		40	26.591	+27	43	19.33
1903.						
Jan. 14			30.294			26.58
1902.			**No. 596.**			
Feb. 4		40	33.471	+18	33	27.42
1903.						
Jan. 15			36.928			33.77
1903.			**No. 597.**			
Jan. 16		40	54.730	+19	19	4.23
Feb. 10			.653			5.05
			54.692			4.64
1903.			**No. 598.**			
Feb. 16		41	26.053	+20	16	4.78
17			25.995			4.46
			26.024			4.62
1903.			**No. 599.**			
Dec. 14		42	12.229	+29	3	51.34
21			.273			50.91
			12.251			51.12
1903.			**No. 600.**			
Dec. 22		42	40.969	+24	34	18.71
24			.955			18.47
			40.962			18.59
1901.			**No. 601.**			
Dec. 20		42	50.900	+21	8	26.55
30			.983			26.85
			50.941			26.70

No. 602.

1902.	h	m	s	°	′	″
Jan. 3	4	43	52.985	+23	13	32.39
6			.961			32.67
			52.973			32.53
1902.			**No. 603.**			
Jan. 7		44	7.647	+15	43	59.63
9			.655			.43
			7.651			59.53
1903.			**No. 604.**			
Jan. 16		44	47.281	+17	2	7.89
Feb. 10			.272			8.11
			47.276			8.00
1903.			**No. 605.**			
Feb. 16		45	41.943	+18	40	30.45
17			.901			30.28
			41.922			30.36
1901.			**No. 606. P IV 211.**			
Dec. 20		46	36.013	+27	43	54.80
30			.014			54.76
			36.014			54.78
Mean φ (2)				37	20	25.72
1902.						
Jan. 7			39.777		44	0.91
9			.771			0.40
10			.735			0.90
Feb. 4			.706			0.91
			39.747			0.78
Mean φ (4)				37	20	26.33
1903.						
Jan. 14			43.522			7.20
15			.511			7.56
			43.516			7.38
Mean φ (2)				37	20	25.87
Dec. 22			43.492			7.44
24			.502			7.43
			43.497			7.44
Mean φ (2)				37	20	25.35
1902.			**No. 607.**			
Jan. 3		46	54.238	+26	36	52.94
6			.252			52.63
			54.245			52.78
1903.			**No. 608.**			
Dec. 14		47	39.760	+25	12	20.73
21			.849			20.94
			39.804			20.83

	h	m	s	°	′	″
			No. 609.			
1903.						
Feb. 16	4	47	42.879	+23	9	16.69
17			.898			16.20
			42.889			16 45
1902.			**No. 610.**			
Feb. 4		48	55.240	+20	56	25.16
1903.						
Jan. 15			58.759			31.45
1903.			**No. 611.**			
Jan. 16		49	27.567	+20	9	25.18
Feb. 10			.574			25.43
			27.570			25.30
1901.			**No. 612.**			
Dec. 20		50	9.630	+22	25	9.31
30			.639			9.86
			9.634			9.59
1902.			**No. 613.**			
Jan. 3		50	17.398	+24	26	9.61
6			.375			9.66
			17.386			9.64
1901.			**No. 614.**			
Jan. 7		51	42.655	+16	59	59.62
9			.668			59.71
			42.662			59.67
1902.			**No. 615.**			
Jan. 10		51	51.843	+23	47	44.97
1903.						
Jan. 14			55.457			50.81
1902.			**No. 616.**			
Feb. 4		52	9.510	+24	53	57.92
1903.						
Jan. 15			13.137		54	3.34
1903.			**No. 617.**			
Jan. 16		52	40.729	+18	50	36.83
Feb. 10			.717			36.51
			40.723			36.67
1901.			**No. 618.**			
Dec. 20		53	31.332	+25	47	15.17
30			.343			15.23
			31.337			15.20
1902.			**No. 619.**			
Jan. 3		53	47.558	+27	10	39.84
6			.549			39.74
			47.554			39.79

	h	m	s	°	′	″
			No. 620.			
1901.						
Jan. 7	4	54	57.919	+29	11	21.34
9			.952			21.78
			57.936			21.56
1902.			**No. 621.**			
Jan. 10		55	34.975	+22	57	35.95
1903.						
Jan. 14			38.651			41.24
1902.			**No. 622.**			
Feb. 4		56	6.402	+19	49	21.76
1903.						
Jan. 15			9.942			27.23
1902.			**No. 623. *ι* Tauri.**			
Jan. 3		57	14.256	+21	27	0.62
6			.238			.073
			14.247			.067
Mean φ (2)				37	20	25.76
1903.						
Jan. 16			17.751			5.72
Feb. 10			.890			6.06
16			.800			5.87
17			.775			6.35
			17.804			6.00
Mean φ (4)				37	20	25.79
Dec. 14			17.776			6.08
21			.822			6.00
22			.821			5.91
24			.826			6.45
			17.811			.611
Mean φ (4)				37	20	25.16
1901.			**No. 624.**			
Dec. 20		57	47.518	+24	50	6.23
30			.488			6.81
			47 503			6.52
1902.			**No. 625.**			
Jan. 7		58	30.267	+27	33	34.24
9			.306			34.20
			30.286			34.22
1902.			**No. 626.**			
Jan. 10		59	12.155	+17	38	47.72
1903.						
Jan. 14			15.691			53.05
1902.			**No. 627.**			
Feb. 4		59	42.721	+22	55	34.43
1903.						
Jan. 15			46.354			39.48

	h	m	s	°	′	″
			No. 628.			
1903.						
Jan. 16	4	59	49.002	+19	40	24.42
Feb. 10			.112			24.34
			49.057			24.38
1903.			**No. 629.**			
Feb. 16		59	53.076	+26	17	48.63
17			.098			49.08
			53.087			48.85
1901.			**No. 630.**			
Dec. 20	5	1	18.189	+16	41	44.46
30			.220			45.05
			18.204			44.75
1902.			**No. 631.**			
Jan. 3		1	39.448	+18	30	49.12
6			.394			48.74
			39.421			48.93
1902.			**No. 632.**			
Jan. 7		2	0.425	+20	17	21.97
9			.386			21.81
			0.405			21.89
1903.			**No. 633.**			
Dec. 14		2	7.393	+21	34	36.52
21			.418			36.21
			7.406			36.37
1902.			**No. 634.**			
Jan. 10		2	8.263	+24	8	9.52
1903.						
Jan. 14			11.924			14.12
1902.			**No. 635.**			
Feb. 4		3	3.434	+19	43	58.13
1903.						
Jan. 15			6.970		44	2.82
1903.			**No. 636.**			
Jan. 16		3	33.106	+29	40	25.87
Feb. 10			.134			26.15
			33.120			26.01
1903.			**No. 637.**			
Feb. 16		3	39.618	+27	54	26.72
17			.632			26.56
			39.625			26.64

		No. 638.				
1903.	h	m	s	°	′	″
Dec. 22	5	4	8.850	+15	28	24.80
24			.753			25.42
			8.802			25.11
1903.		**No. 639.**				
Dec. 28		4	47.577	+25	1	28.68
29			.565			28.43
			47.571			28.56
1902.		**No. 640.**				
Jan. 7		5	3.282	+23	5	7.36
9			.264			7.22
			3.273			7.29
1902.		**No. 641.**				
Feb. 4		6	3.804	+15	55	29.31
1903.						
Jan. 15			7.270			33.60
1902.		**No. 642.**				
Jan. 10		6	17.496	+26	20	20.04
1903.						
Jan. 14			21.203			25.17
1903.		**No. 643.**				
Jan. 16		6	52.822	+17	5	44.92
Feb. 10			.873			45.51
			52.848			45.21
1902.		**No. 644.**				
Jan. 7		8	14.944	+21	6	30.49
9			.954			30.28
			14.949			30.38
1902.		**No. 645.**				
Feb. 4		9	23.376	+19	56	39.53
1903.						
Jan. 15			26.982			43.66
1902.	**No. 646. 108 Tauri.**					
Jan. 10		9	34.213	+22	10	21.69
Mean φ (1)				37	20	26.06
1903.						
Jan. 14			37.830			25.93
Mean φ (1)				37	20	26.29
Dec. 14			.834			26.48
21			.807			26.41
28			.786			26.41
29			.830			26.86
			37.814			26.54
Mean φ (4)				37	20	25.26

		No. 646a.				
1903.	h	m	s	°	′	″
Jan. 16	5	10	8.583	+18	31	41.82
Feb. 10			.519			42.16
			8.551			41.99
1903.		**No. 647.**				
Feb. 16		10	47.728	+27	36	34.15
17			.749			34.16
			47.738			34.15
1903.		**No. 649.**				
Dec. 22		11	7.422	+28	47	52.43
24			.388			52.20
			7.405			52.32
1903.		**No. 650.**				
Dec. 28		11	37.340	+23	54	19.76
29			.399			19.96
			37.370			19.86
1902.		**No. 651.**				
Jan. 7		12	39.274	+21	41	15.52
9			.275			14.99
			39.275			15.25
1902.	**No. 652. n Tauri.**					
Feb. 4		13	23.197	+21	59	43.15
Mean φ (1)				37	20	26.36
1903.						
Jan. 15			26.895			47.16
Mean φ (1)				37	20	25.80
1904.						
Jan. 7			30.468	+21	59	51.11
11			.448			51.40
			30.458			51.26
Mean φ (2)				37	20	24.99
1902.		**No. 653.**				
Jan. 10		13	26.861	+20	1	54.97
1903.						
Jan. 14			30.327			59.33
1903.		**No. 654.**				
Jan. 16		13	46.072	+26	9	28.21
Feb. 10			.112			27.59
			46.092			27.90
1903.		**No. 655.**				
Dec. 14		14	20.313	+25	4	17.69
21			.250			17.46
			20.281			17.58

		No. 656.				
1903.	h	m	s	°	′	″
Feb. 16*	5	14	35.001	+19	28	44.30
17			34.978			43.84
			34.990			44.07
1903.		**No. 657.**				
Dec. 22		14	53.883	+27	51	32.94
24			.846			33.12
			53.865			33.03
1902.		**No. 658.**				
Jan. 7		14	58.642	+29	28	13.92
9			.624			13.65
			58.633			13.79
1903.		**No. 659.**				
Dec. 28		15	12.761	+19	42	58.96
29			.769			58.59
			12.765			58.77
1903.		**No. 660.**				
Dec. 14		15	[58.43]	+18	48	37.84
21			58.261			38.53
						38.19
1904.						
Jan. 7		16	1.851			42.00
1902.		**No. 661.**				
Jan. 7		18	42.295	+17	17	33.24
9			.345			32.46
			42.320			32.85
1902.		**No. 662.**				
Jan. 10		18	51.220	+23	29	50.70
1903.						
Jan. 14			54.890			54.31
1902.		**No. 663.**				
Feb. 4		19	20.897	+20	29	40.02
1903.						
Jan. 15			24.431			43.18
1903.		**No. 664.**				
Jan. 16		20	2.241	+25	40	22.48
Feb. 10			.243			22.66
			2.242			22.57
1903.	**No. 665. β Tauri.**					
Dec. 22		20	9.578	+28	31	32.84
24			.557			32.26
28			.584			32.53
29			.599			32.30
			9.580			32.48
Mean φ (4)				37	20	25.89

No. 666.

	h	m	s	°	′	″
1903.						
Feb. 16	5	20	56.278	+27	31	33.58
17			.199			33.15
			56.239			33.37

No. 667.

	h	m	s	°	′	″
1903.						
Dec. 14		21	30.529	+17	52	44.66
21			.572			44.28
			30.550			44.47

No. 668. *o* Tauri.

	h	m	s	°	′	″
1902.						
Jan. 7		21	44.910	+21	51	12.12
9			.887			12.51
			44.899			12.31
Mean φ (2)				37	20	26.16
1903.						
Dec. 28			48.497			15.83
29			.470			15.75
			48.483			15.79
Mean φ (2)				37	20	25.58
1904.						
Jan. 7			52.128			19.08
11			.128			19.21
			52.128			19.14
Mean φ (2)				37	20	25.19

No. 669.

	h	m	s	°	′	″
1902.						
Jan. 10		21	58.692	+23	12	40.34
1903.						
Jan. 14		22	2.294			43.74

No. 670.

	h	m	s	°	′	″
1902.						
Feb. 4		22	20.289	+17	9	28.10
1903.						
Jan. 15			23.774			31.47

No. 671.

	h	m	s	°	′	″
1903.						
Jan. 16		23	18.280	+25	4	19.75
Feb. 10			.335			19.84
			18.307			19.80

No. 672.

	h	m	s	°	′	″
1903.						
Feb. 16		24	19.571	+21	18	13.44
17			.585			13.99
			19.578			13.72

No. 673.

	h	m	s	°	′	″
1902.						
Jan. 7		25	59.248	+19	28	38.65
9			.255			39.35
			59.251			39.00

No. 674.

	h	m	s	°	′	″
1902.						
Jan. 10	5	26	0.775	+29	7	21.87
1903.						
Jan. 14			4.586			25.21

No. 675.

	h	m	s	°	′	″
1902.						
Feb. 4		26	20.448	+26	54	34.75
1903.						
Jan. 15			24.247			37.27

No. 676.

	h	m	s	°	′	″
1903.						
Dec. 14		26	31.506	+18	31	20.21
21			.529			19.99
			31.518			20.10

No. 677.

	h	m	s	°	′	″
1903.						
Dec. 28		26	36.709	+16	59	11.36
29			.769			11.12
			36.739			11.24

No. 678.

	h	m	s	°	′	″
1903.						
Dec. 22		27	50.506	+18	28	16.65
24			.474			17.01
			50.490			16.83

No. 679.

	h	m	s	°	′	″
1904.						
Jan. 7		27	56.397	+20	24	22.96
11			.436			23.04
			56.416.			23.00

No. 680.

	h	m	s	°	′	″
1902.						
Jan. 7		29	1.006	+22	30	8.90
9			0.975			8.64
			0.990			8.77

No. 681.

	h	m	s	°	′	″
1902.						
Jan. 10		29	27.968	+23	58	29.00
1903.						
Jan. 14			31.646			32.03

No. 682.

	h	m	s	°	′	″
1903.						
Jan. 16		29	50.264	+27	35	56.60
Feb. 10			.254			57.34
			50.259			56.97

No. 683.

	h	m	s	°	′	″
1903.						
Feb. 16		30	1.110	+24	41	8.11
17			.141			7.83
			1.126			7.97

No. 684.

	h	m	s	°	′	″
1903.						
Dec. 14	5	30	29.523	+25	52	38.01
21			.529			36.95
			29.526			37.48

No. 685.

	h	m	s	°	′	″
1904.						
Jan. 7		31	9.086	+26	51	52.65
11			.077			53.05
			9.081			52.85

No. 686.

	h	m	s	°	′	″
1903.						
Dec. 22		31	26.020	+16	58	50.09
24			25.958			50.23
			25.989			50.16

No. 687.

	h	m	s	°	′	″
1903.						
Dec. 28		31	50.076	+19	43	12.60
29			.148			12.65
			50.112			12.63

No. 688. ζ Tauri.

	h	m	s	°	′	″
1902.						
Feb. 4		31	47.279	+21	4	59.04
Mean φ (1)				37	20	25.96
1903.						
Jan. 15			50.835		5	1.11
16			.809			1.38
Feb. 10			.740			0.95
16			.832			0.78
17			.844			1.04
20			.840			1.20
			50.817			1.08
Mean φ (6)				37	20	25.87

No. 689.

	h	m	s	°	′	″
1902.						
Jan. 7		33	4.392	+29	9	31.50
9			.371			31.17
			4.381			31.33

No. 690.

	h	m	s	°	′	″
1902.						
Jan. 10		33	39.803	+25	50	32.07
1903.						
Jan. 14			43.538			34.64

No. 691.

	h	m	s	°	′	″
1902.						
Feb. 4		35	23.058	+20	0	39.54
1903.						
Jan. 15			26.631			42.03
Feb. 20			.638			41.94
			26.635			41.99

No. 692.

	h	m	s	°	′	″
1903.						
Dec. 14	5	35	41.342	+16	29	1.46
21			.326			1.13
			41.334			1.29

No. 693.

	h	m	s	°	′	″
1903.						
Dec. 28		35	43.780	+17	28	18.81
29			.884			18.62
			43.832			18.71

No. 694.

	h	m	s	°	′	″
1903.						
Dec. 22		36	0.868	+24	16	9.13
24			.859			8.55
			0.863			8.84

No. 695.

	h	m	s	°	′	″
1902.						
Jan. 7		36	8.451	+22	36	40.82
9			.460			40.84
			8.456			40.83

No. 696.

	h	m	s	°	′	″
1902.						
Jan. 10		37	7.741	+18	55	59.02
1903.						
Jan. 14			11.338		56	1.45

No. 697.

	h	m	s	°	′	″
1903.						
Feb. 16		37	26.087	+23	9	30.49
17			.051			30.91
			26.069			30.70

No. 698.

	h	m	s	°	′	″
1903.						
Jan. 16		37	33.296	+21	22	14.11
Feb. 10			.370			14.60
			33.333			14 36

No. 699.

	h	m	s	°	′	″
1902.						
Feb. 4		38	11.472	+27	41	13.24
1903.						
Jan. 15			15.232			14.93
Feb. 20			.208			15.15
			15.220			15.04

No. 700.

	h	m	s	°	′	″
1903.						
Dec. 14		38	53.591	+26	18	0.03
21			.576		17	59.81
			53.583		17	59.92

No. 701.

	h	m	s	°	′	″
1902.						
Jan. 7	5	39	14.466	+16	2	37.10
9			.511			36.82
			14.488			36.96

No. 702.

	h	m	s	°	′	″
1903.						
Feb. 16		41	0.504	+20	8	9.05
17			.523			8.81
			0.514			8.93

No. 703.

	h	m	s	°	′	″
1903.						
Dec. 22		41	23.449	+22	29	32.96
24			.468			33.06
			23.458			33.01

No. 704.

	h	m	s	°	′	″
1903.						
Dec. 28		41	34.709	+25	31	56.87
29			.739			57.12
			34.724			57.00

No. 705. 130 Tauri.

	h	m	s	°	′	″
1902.						
Jan. 10		41	43.351	+17	41	33.40
Feb. 4			.373			33.15
			43.362			33.27
Mean φ (2)				37	20	26.10
1903.						
Jan. 14			46.872			34.86
15			.842			34.61
16			.870			34.74
Feb. 10			.888			35.04
20			.850			35.05
			46 864			34.86
Mean φ (5)				37	20	25.85

No. 706.

	h	m	s	°	′	″
1903.						
Dec. 14		41	51.000	+20	54	21.14
21			.094			20.76
			51.047			20.95

No. 707.

	h	m	s	°	′	″
1902.						
Jan. 7		43	0.124	+24	32	5.50
9			.087			5.19
			0.105			5.34

No. 708.

	h	m	s	°	′	″
1903.						
Dec. 22		43	5.354	+29	41	39.92
24			.354			39.57
			5.354			39.74

No. 709.

	h	m	s	°	′	″
1902.						
Jan. 10	5	44	21.906	+19	8	9.17
1903.						
Jan. 14			25.468			10.43

No. 710.

	h	m	s	°	′	″
1902.						
Feb. 4		44	47.559	+27	56	19.03
1903.						
Jan. 15			51.386			19.99
Feb. 20			.330			19.85
			51.358			19.92

No. 711.

	h	m	s	°	′	″
1903.						
Jan. 16		45	56.789	+23	21	25.85
Feb. 10			.720			25.54
			56.754			25.70

No. 712.

	h	m	s	°	′	″
1902.						
Jan. 7		46	35.063	+19	50	34.03
9			.100			33.75
			35.081			33.89

No. 713.

	h	m	s	°	′	″
1903.						
Feb. 16		47	3.767	+26	25	19.05
17			.655			19.30
			3.711			19.17

No. 714.

	h	m	s	°	′	″
1903.						
Dec. 14		47	13.852	+27	35	23.05
21			.825			22.02
			13.839			22.54

No. 715.

	h	m	s	°	′	″
1902.						
Jan. 10		47	25.323	+22	3	4.86
1903.						
Jan. 14			28.976			5.55

No. 716.

	h	m	s	°	′	″
1903.						
Dec. 22		47	31.726	+25	3	4.09
24			.668			4.25
			31.697			4.17

No. 717.

	h	m	s	°	′	″
1902.						
Feb. 4		48	34.764	+20	15	29.86
1903.						
Jan. 15			38.390			30.84
Feb. 20			.284			30.58
			38.337			30.71

No. 718.

1903.	h	m	s	°	′	″
Jan. 16	5	49	12.208	+19	43	52.11
Feb. 10			.126			52.00
			12.167			52.05

No. 719.

	h	m	s	°	′	″
1903.						
Feb. 16		49	19.839	+17	23	1.18
17			.845			1.24
			19.842			1.21

No. 720.

	h	m	s	°	′	″
1903.						
Dec. 28		50	24.026	+28	55	37.20
29			.116			37.06
			24.071			37.13

No. 721.

	h	m	s	°	′	″
1902.						
Jan. 10		50	56.028	+24	14	7.39
1903.						
Jan. 14			59.717			8.07

No. 722. 139 Tauri.

	h	m	s	°	′	″
1902.						
Jan. 7		51	54.821	+25	56	31.11
9			.817			30.87
			54.819			30.99
Mean φ (2)				37	20	25 30
1903.						
Dec. 14			58.562			31.16
21			.552			30.85
			58.557			31.00
Mean φ (2)				37	20	25.51

No. 723.

	h	m	s	°	′	″
1903.						
Feb. 16		53	3.389	+16	35	16.66
17			.423			16.30
			3.406			16.48

No. 724.

	h	m	s	°	′	″
1903.						
Dec. 28		53	8.435	+20	40	3.13
29			.467			2.78
			8.451			2.96

Anon.

	h	m	s	°	′	″
1903.						
Dec. 22		52	50.371	+18	51	10.84
1904.						
Jan. 11			53.910			11.34

No. 725.

1903.	h	m	s	°	′	″
Dec. 24	5	53	12.551	+18	48	41.08
1904.						
Jan. 7			16.080			40.90

No. 726.

	h	m	s	°	′	″
1902.						
Feb. 4		53	46.627	+21	35	49.08
1903.						
Jan. 15			50.228			48.72
Feb. 20			.173			49.29
			50.200			49.00

No. 727.

	h	m	s	°	′	″
1902.						
Jan. 10		54	31.776	+22	53	39.37
1903.						
Jan. 14			35.488			39.68
16			.478			39.89
Feb. 10			.488			39.43
			35.485			39.67

No. 728.

	h	m	s	°	′	″
1903.						
Dec. 14		54	54.726	+27	34	3.30
21			.757			2.33
			54.742			2.82

No. 729.

	h	m	s	°	′	″
1903.						
Dec. 22		55	50.210	+22	23	54.71
24			.236			54.30
			50.223			54.50

No. 730.

	h	m	s	°	′	″
1902.						
Jan. 7		57	39.349	+19	41	32.31
9			.336			33.34
			39.342			32.83

No. 731.

	h	m	s	°	′	″
1902.						
Jan. 10		58	4.568	+28	18	13.02
1903.						
Jan. 14			8.455			13.30

No. 732.

	h	m	s	°	′	″
1903.						
Dec. 14		58	9.554	+20	8	27.38
21			.547			27.04
			9.550			27.21

No. 733.

	h	m	s	°	′	″
1903.						
Feb. 16		58	11.237	+17	7	45.65
17			.221			45.65
			11.229			45.65

No. 734. I Gemin.

1902.	h	m	s	°	′	″
Feb. 4	5	58	9.876	+23	16	7.82
Mean φ (1)				37	20	26.28
1903.						
Jan. 15			13.473			7.57
Feb. 20			.453			7.23
26			.440			7.83
27			.403			7.67
Mar. 11			.441			7.90
			13.442			7.64
Mean φ (5)				37	20	26.12
1904.						
Jan. 7			17.124			8.04
11			.037			8.14
15			.093			8.22
			17.085			8.13
Mean φ (3)				37	20	25 13

No. 735.

	h	m	s	°	′	″
1903.						
Dec. 28		58	12.268	+25	26	52.53
29			.316			52.47
			12.292			52.50

No. 736.

	h	m	s	°	′	″
1903.						
Jan. 16		59	12.668	+24	21	0.31
Feb. 10			.657		20	59.74
			12.663		21	0.03

No. 737.

	h	m	s	°	′	″
1902.						
Jan. 7		59	14.506	+18	18	57.61
9			.488			58.57
			14.497			58.09

No. 738.

	h	m	s	°	′	″
1903.						
Dec. 22	6	0	10.928	+29	31	12.70
24			.950			12.72
			10.939			12.71

No. 739.

	h	m	s	°	′	″
1903.						
Jan. 16		0	53.008	+21	53	45.97
Feb. 10			.041			46.26
			53.024			46.11

No. 740.

	h	m	s	°	′	″
1903.						
Feb. 26		0	53.892	+23	38	51.70
27			.847			51.86
			53.870			51.78

No. 741.

	h	m	s	°	′	″
1902.						
Jan. 10		1	12.983	+26	41	32.16
1903.						
Jan. 14			16.763			32.99

No. 742.

1903.	h	m	s	°	′	″
Dec. 28	6	1	20.481	+16	11	15.27
29			.481			14.63
			20.481			14.95

No. 743.

	h	m	s	°	′	″
1903.						
Dec. 14		1	53.551	+27	26	32.58
21			.582			32.02
			53.566			32.30

No. 744.

	h	m	s	°	′	″
1903.						
Mar. 11		3	41.545	+22	12	22.00
1904.						
Jan. 15			45.168			22.17

No. 745. 3 Gemin.

	h	m	s	°	′	″
1902.						
Feb. 4		3	46.950	+23	7	46.90
1903.						
Jan. 15			50.597			46.49
Feb. 20			.619			46.89
			50.608			46.69

No. 746.

	h	m	s	°	′	″
1903.						
Feb. 16		4	15.177	+19	41	34.04
17			.145			34.39
			15.161			34.22

No. 747.

	h	m	s	°	′	″
1903.						
Dec. 22		4	51.794	+26	2	0.73
24			.743			1.21
			51.768			0.97

No. 748.

	h	m	s	°	′	″
1903.						
Dec. 14		5	5.374	+28	55	36.91
21			.372			36.17
			5.373			36.54

No. 749.

	h	m	s	°	′	″
1903.						
Mar. 11		5	21.252	+18	8	59.69
1904.						
Jan. 15			24.775			58.98

No. 750.

	h	m	s	°	′	″
1902.						
Feb. 4		5	31.734	+24	26	31.38
1903.						
Jan. 15			35.429			29.82
Feb. 20			.377			29.98
			35.403			29.90

No. 751.

	h	m	s	°	′	″
1903.						
Jan. 16		5	35.664	+20	55	31.80
Feb. 10			.653			31.95
			35.659			31.88

No. 752.

1903.	h	m	s	°	′	″
Feb. 26	6	5	42.537	+27	9	15.03
27			.491			14.34
			42.514			14.68

No. 753.

	h	m	s	°	′	″
1903.						
Dec. 29		6	0.380	+17	23	55.81
1904.						
Jan. 12			3.944			54.69

No. 754.

	h	m	s	°	′	″
1904.						
Jan. 7		6	20.187	+19	48	44.30
11			.124			44.03
			20.156			44.17

No. 755.

	h	m	s	°	′	″
1903.						
Feb. 16		6	26.316	+22	55	50.16
17			.290			50.63
			26.303			50.40

No. 756.

	h	m	s	°	′	″
1903.						
Dec. 22		6	27.672	+16	9	9.63
24			.683			9.87
			27.678			9.75

No. 757.

	h	m	s	°	′	″
1903.						
Feb. 26		7	51.310	+18	42	21.93
27			.296			21.90
			51.303			21.91

No. 758.

	h	m	s	°	′	″
1902.						
Feb. 4		8	45.179	+17	56	2.81
1903.						
Jan. 15			48.729			1.96
Feb. 20			.716			2.36
			48.723			2.16

No. 759. η Gemin.

	h	m	s	°	′	″
1903.						
Jan. 16		9	1.404	+22	32	6.75
Feb. 10			.395			6.45
			1.399			6.60
Mean φ (2)				37	20	26.06

No. 760.

	h	m	s	°	′	″
1903.						
Mar. 11		9	8.416	+19	11	23.28
1904.						
Jan. 15			12.013			22.10

No. 761. κ Aurig.

1903.	h	m	s	°	′	″
Dec. 14	6	9	11.833	+29	32	2.75
21			.840			2.52
			11.837			2.64
Mean φ (2)				37	20	25.62

No. 762.

	h	m	s	°	′	″
1903.						
Feb. 16		9	25.378	+25	21	47.05
17			.372			46.68
			25.375			46 86

No. 763.

	h	m	s	°	′	″
1903.						
Dec. 28		9	48.151	+27	53	33.01
29			.162			33.79
			48.156			33.40

No. 764.

	h	m	s	°	′	″
1903.						
Dec. 22		10	23.490	+24	0	5.99
24			.511			6.68
			23.500			6.34

No. 765.

	h	m	s	°	′	″
1904.						
Jan. 7		10	49.192	+17	12	48.72
11			.153			48.88
			49.172			48.80

No. 766.

	h	m	s	°	′	″
1903.						
Feb. 26		11	3.676	+23	46	26.51
27			.644			26.21
			3.660			26.36

No. 767.

	h	m	s	°	′	″
1902.						
Feb. 4		11	38.159	+20	50	33.10
1903.						
Jan. 15			41.667			31.77
Feb. 20			.658			31.54
			41.662			31.66

No. 768.

	h	m	s	°	′	″
1903.						
Jan. 16		12	16.145	+27	14	53 26
Feb. 10			.193			52.34
			16.169			52.80

No. 769.

	h	m	s	°	′	″
1903.						
Feb. 16		12	59.827	+23	38	27.72
17			.806			27.72
			59.817			27.72

			No. 770.			
1903.	h	m	s	°	′	″
Mar. 11	6	13	23.442	+17	21	49.11
1904.						
Jan. 15			26.880			48.41
1903.			**No. 771.**			
Dec. 14		13	34.070	+18	54	25.57
21			.173			25.63
			34.122			25.60
1903.			**No. 772.**			
Dec. 22		14	37.444	+25	13	50.64
24			.552			50.50
			37.498			50.57
1903.			**No. 773.**			
Dec. 28		15	0.490	+29	35	5.11
29			.514			5.25
			0.502			5.18
1902.			**No. 774.**			
Feb. 4		15	22.854	+21	10	33.70
1903.						
Jan. 15			26.520			31.94
Feb. 20			.486			32.52
			26.503			32.23
1904.			**No. 775.**			
Jan. 7		15	49.844	+17	48	29.08
11			.801			29.70
			49.823			29.39
1903.			**No. 776.**			
Mar. 11		15	50.808	+19	56	11.05
1904.						
Jan. 15			54.325			9.06
1903.			**No. 777.**			
Jan. 16		15	54.174	+23	48	21.55
Feb. 10			.168			21.18
			54.171			21.37
1903.			**No. 778.**			
Dec. 14		16	22.671	+26	43	10.73
21			.700			10.07
			22.685			10.40

			No. 779. μ Gemin.			
1903.	h	m	s	°	′	″
Feb. 16	6	17	5.599	+22	33	49.45
17			.565			48.81
26			.534			49.36
27			.532			49.56
			5.558			49.29
Mean φ (4)				37	20	26.10
1903.			**No. 780.**			
Dec. 22		18	45.296	+25	5	59.67
24			.307			59.98
			45.301			59.82
1903.			**No. 781.**			
Dec. 28		18	52.555	+28	5	1.92
29			.503			2.47
			52.529			2.20
1902.			**No. 782.**			
Feb. 4		19	49.871	+21	41	58.46
1903.						
Feb. 20			53.474			57.15
26			.436			56.73
			53.455			56.94
1903.			**p.**			
Jan. 16		20	24.793	+22	46	27.87
Feb. 10			.808			28.14
			24.800			28.00
1903.			**No. 783.**			
Mar. 11		20	29.112	+18	48	59.18
1904.						
Jan. 15			32.585			57.34
1903.			**No. 784.**			
Dec. 14		21	30.373	+21	21	6.83
21			.383			6.06
			30.378			6.44
1904.						
Jan. 7			34.018			5.23
1903.			**No. 785.**			
Feb. 16		22	4.143	+23	43	40.19
17			.107			40.00
			4.125			40.10
1902.			**No. 786.**			
Feb. 4		22	7.009	+20	33	19.68
1903.						
Jan. 15			10.565			17.92
20			.594			17.52
			10.580			17.72

			No. 787.			
1903.	h	m	s	°	′	″
Feb. 26	6	22	52.071	+27	1	49.67
27			.052			50.16
			52.062			49.92
1903.			**No. 788. ν Gemin.**			
Dec. 14		23	12.220	+20	16	25.36
21			.269			25.32
22			.287			25.84
24			.287			25.72
28			.283			25.96
29			.259			25.90
			12.268			25.68
Mean φ (6)				37	20	25.72
1904.						
Jan. 7			15.800			23.66
11			.851			23.32
			15.826			23.49
Mean φ (2)				37	20	25.75
1903.			**No. 789.**			
Jan. 16		24	14.842	+28	16	36.24
Feb. 10			.899			35.20
			14.870			35.72
1903.			**No. 790.**			
Feb. 16		24	33.836	+29	53	39.26
17			.826			39.10
			33.831			39.18
1903.			**No. 791.**			
Mar. 11		25	32.741	+17	0	23.59
1904.						
Jan. 15			36.219			21.21
1902.			**No. 792.**			
Feb. 4		26	5.236	+22	15	17.55
1903.						
Jan. 15			8.911			15.25
Feb. 20			.833			16.09
			8.872			15.67
1903.			**No. 793.**			
Feb. 26		26	38.937	+17	51	10.86
27			.938			10.75
			38.937			10.80
1903.			**No. 794.**			
Jan. 16		27	11.152	+25	21	5.21
Feb. 10			.303			4.48
			11.228			4.84

1903.	h	m	s	°	′	″
			No. 795.			
Feb. 16	6	27	22.955	+24	6	47.21
17			.974			47.11
			22.964			47.16
1903.			**No. 796.**			
Mar. 11		28	55.825	+19	30	14.69
1904.						
Jan. 15			59.358			12.46
1903.			**No. 797.**			
Dec. 14		29	5.605	+28	5	53.80
21			.562			53.01
			5.584			53.40
1902.			**No. 798.**			
Feb. 4		29	45.970	+20	58	3.52
1903.						
Jan. 15			49.500			1.10
Feb. 20			.538			1.44
			49.519			1.27
1903.			**No. 799.**			
Jan. 16		30	14.776	+17	46	14.00
Feb. 10			.891			13 81
			14.833			13.90
1903.			**No. 800.**			
Feb. 16		30	49.517	+23	10	38.98
17			.554			38.92
			49.536			38.95
1903.			**No. 801.**			
Feb. 26		31	30.497	+24	40	18.08
27			.508			17.86
			30.503			17.97
1903.			**No. 802.** γ **Gemin.**			
Mar. 11		32	6.483	+16	28	55.80
Mean φ (1)				37	20	27.03
1904.						
Jan. 7			9.974			53.48
11			10.004			53.33
15			.000			53.04
			9.993			53.28
Mean φ (3)				37	20	25.86
1903.			**No. 803.**			
Dec. 14		32	14.020	+29	4	3.46
21			13.965			2.77
			13.992			3.12

1903.	h	m	s	°	′	″
			No. 804.			
Dec. 22	6	32	37.943	+26	35	1.52
24			.939			1.12
			37.941			1.32
1902.			**No. 805.**			
Feb. 4		33	11.608	+22	7	2.15
1903.						
Jan. 15			15.220		6	58.88
Feb. 20			.247			58.89
			15.233			58.89
1903.			**No. 806.**			
Dec. 28		33	26.149	+28	20	56.70
29			.196			56.58
			26.173			56.64
1903.			**No. 807.**			
Jan. 16		34	11.044	+23	45	40.96
Feb. 10			.065			40 69
			11.054			40.82
1903.			**z.**			
Feb. 16		34	13.294	+20	34	26.90
17			.247			26.93
			13.270			26.91
1904.			**No. 808.**			
Jan. 7		34	21.815	+19	44	46.19
11			.820			46.55
			21.817			46.37
1903.			**No. 809.**			
Feb. 26		35	14.160	+28	17	11.41
27			.106			11.34
			14.133			11.37
1903.			**No. 810.**			
Mar. 11		35	39.340	+27	10	20.40
1904.						
Jan. 15			43.061			17.11
1903.			**No. 811.**			
Dec. 14		36	45.444	+17	44	25.10
21			.462			25.47
			45.453			25.28

1903.	h	m	s	°	′	″
			No. 812. ε **Gemin.**			
Dec. 22	6	37	57.928	+25	13	39.20
24			.910			38.71
28			.916			39.16
29			.892			39.44
			57.911			39.13
Mean φ (4)				37	20	25.41
1904.						
Jan. 7		38	1.595			35.78
11			.620			35.97
			1.607			35.87
Mean φ (2)				37	20	25.27
1903.			**No. 813.**			
Feb. 16		38	36.726	+29	4	9.20
17			.714			8.61
			36.720			8.90
1902.			**No. 814.**			
Feb. 4		38	40.211	+20	47	30.01
1903.						
Jan. 15			43.776			26.85
Feb. 20			.773			26.63
			43.774			26.74
1903.			**No. 815.**			
Jan. 16		39	4.606	+22	56	9.50
Feb. 10			.640			9.03
			4.623			9.27
1903.			**No. 816.**			
Dec. 14		39	9.239	+19	37	33.20
21			.221			33.06
			9.230			33.13
1903.			**No. 817.**			
Mar. 11		40	17.221	+23	28	16.55
1904.						
Jan. 15			20.834			13.00
1902.			**No. 818.**			
Feb. 4		40	24.177	+21	38	5.56
1903.						
Jan. 15			27.695			2.00
Feb. 20			.753			2.09
26			.787			1.97
			27.745			2.02
1903.			**No. 819.**			
Feb. 16		41	43.441	+18	17	56.06
17			.435			54.94
			43.438			55.50

	h	m	s	°	′	″
			No. 820.			
1903.						
Jan. 16	6	42	33.459	+24	28	16.27
Feb. 10			.487			15.49
			33.473			15.88
1903.			**No. 821.**			
Feb. 26		43	6.768	+27	17	58.60
27			.747			58.01
			6.757			58.30
1902.			**No. 822.**			
Feb. 4		43	51.618	+19	16	43.48
1903.						
Jan. 15			55.139			38.63
Feb. 20			.155			39.46
			55.147			39.04
1903.			**No. 823.**			
Mar. 11		44	14.834	+16	18	47.57
1904.						
Jan. 15			18.324			43.41
1903.			**No. 824.**			
Dec. 14		44	27.854	+17	42	3.82
21			.948			3.53
			27.901			3.67
1903.			**No. 825.**			
Feb. 16		45	0.932	+25	52	40.63
17			.937			40.38
			0.934			40.50
1903.			**No. 826.**			
Jan. 16		45	44.329	+21	52	34.17
Feb. 10			.335			33.06
			44.332			33.62
1903.			**No. 827.**			
Dec. 22		46	5.800	+20	27	1.66
24			.793			2.00
			5.796			1.83
1903.			**No. 828.**			
Feb. 26		46	6.714	+23	43	0.62
27			.667		42	59.64
			6.690		43	0.13

	h	m	s	°	′	″
			No. 829.			
1902.						
Feb. 4	6	48	30.427	+21	17	3.38
1903.						
Jan. 15			34.020		16	58.41
Feb. 20			.010			59.42
			34.015			58.92
1903.			**No. 830.**			
Jan. 16		48	47.977	+24	22	9.39
Feb. 10			.922			8.03
			47.950			8.71
1903.			**No. 831.**			
Feb. 16		49	20.843	+25	29	50.38
17			.807			49.79
			20.825			50.09
1903.			**No. 832.**			
Feb. 26		49	52.999	+27	24	34.77
27			.947			34.97
			52.973			34.87
1902.			**No. 833.**			
Feb. 4		50	34.661	+17	51	52.24
1903.						
Jan. 15			38.113			47.10
Feb. 20			.133			47.68
			38.123			47.39
1903.			**No. 834.**			
Jan. 16		52	21.122	+22	36	8.60
Feb. 10			.193			8.35
			21.157			8.48
1903.			**No. 835.**			
Feb. 16		52	48.760	+26	12	31.28
17			.779			30.73
			48.770			31.00
1903.			**No. 836.**			
Feb. 26		52	49.927	+19	21	7.59
27			.829			7.73
			49.878			7.66
1903.			**No. 837.**			
Mar. 11		53	28.653	+26	2	46.00
1904.						
Jan. 15			32.355			41.00

	h	m	s	°	′	″
			No. 838.			
1902.						
Feb. 4	6	53	[34.54]	+20	34	42.01
1903.						
Jan. 15			37.931			36.79
Feb. 20			.900			37.26
			37.916			37.02
1903.			**No. 839.**			
Dec. 14		54	41.402	+16	12	47.39
21			.391			46.39
			41.396			46.89
1903.			**No. 840.**			
Dec. 22		54	55.471	+27	17	31.95
24			.403			32.43
			55.437			32.19
1903.			**No. 841.**			
Dec. 28		56	17.170	+21	56	9.93
29			.094			9.81
			17.132			9.87
1904.			**No. 842.**			
Jan. 7		56	33.896	+24	21	9.45
11			.907			9.83
			33.901			9.64
1903.			**No. 843.**			
Jan. 16		56	46.978	+17	53	37.80
Feb. 10			47.070			36.95
			47.024			37.38
1903.			**No. 844.**			
Mar. 11		56	57.600	+16	48	49.71
1904.						
Jan. 15		57	1.070			44.57
1903.			**No. 845.**			
Dec. 14		57	20.655	+29	29	59.36
21			.623			59.24
			20.639			59.30
1903.			**No. 846.**			
Dec. 22		57	34.724	+27	8	47.27
24			.770			47.36
			34.747			47.32

No. 847.

Date	h	m	s	°	′	″
1903.	h	m	s	°	′	″
Dec. 28	6	57	47.941	+19	21	50.56
29			.967			50.23
			47.954			50.40

No. 848. ζ Gemin.

Date	h	m	s	°	′	″
1902.						
Feb. 4		58	17.820	+20	42	51.35
Mean φ (1)				37	20	26.48
1903.						
Jan. 15			21.405			45.94
16			.415			46.87
Feb. 10			.455			46.07
16			.425			46.69
17			.417			46.30
20			.411			46.54
26			.431			46.87
27			.369			46.86
			21.416			46.52
Mean φ (8)				37	20	25.82
1904.						
Jan. 28			24.910			41.44
29			.875			41.04
			24.892			41.24
Mean φ (2)				37	20	25.57

No. 849.

Date	h	m	s	°	′	″
1904.						
Jan. 7		59	31.740	+22	46	53.53
11			.663			54.31
			31.701			53.92

No. 850.

Date	h	m	s	°	′	″
1903.						
Mar. 11	7	0	5.765	+25	58	8.22
1904.						
Jan. 15			9.508			1.84

No. 851.

Date	h	m	s	°	′	″
1902.						
Feb. 4		1	16.166	+28	19	39.45
1903.						
Jan. 15			19.929			34.36
Feb. 20			.911			34.35
			19.920			34.35

No. 852.

Date	h	m	s	°	′	″
1903.						
Jan. 16		1	22.734	+24	19	7.84
Feb. 10			.803			6.81
			22.768			7.33

No. 853.

Date	h	m	s	°	′	″
1903.						
Feb. 16		2	48.301	+16	5	9.17
17			.305			8.50
			48.303			8.84

No. 854.

Date	h	m	s	°	′	″
1903.	h	m	s	°	′	″
Feb. 26	7	3	6.060	+17	48	38.15
27			.008			38.30
			6.034			38.23

No. 855.

Date	h	m	s	°	′	″
1903.						
Mar. 11		3	26.385	+19	42	4.55
1904.						
Jan. 15			29.921		41	58.60

No. 856.

Date	h	m	s	°	′	″
1903.						
Dec. 22		3	38.243	+25	53	16.71
24			.203			17.66
			38.223			17.18

No. 857.

Date	h	m	s	°	′	″
1902.						
Feb. 4		4	17.779	+21	25	2.89
1903.						
Jan. 15			21.359			57.16
Feb. 20			.345			57.63
			21.352			57.34

No. 858.

Date	h	m	s	°	′	″
1904.						
Jan. 28		5	25.915	+27	0	52.19
29			.988			52.04
			25.952			52.11

No. 859.

Date	h	m	s	°	′	″
1903.						
Dec. 28		6	10.686	+17	8	15.00
29			.751			14.84
			10.719			14.92

No. 860.

Date	h	m	s	°	′	″
1904.						
Jan. 7		6	36.461	+24	17	21.70
11			.423			22.58
			36.442			22.14

No. 861. 51 Gemin.

Date	h	m	s	°	′	″
1902.						
Feb. 4		7	44.699	+16	19	31.02
Mean φ (1)				37	20	27.18
1903.						
Jan. 15			48.141			25.23
16			.147			25.21
Feb. 10			.103			25.35
16			.169			25.42
17			.149			25.46
20			.124			25.30
26			.163			25.53
27			.151			25.28
			48.143			25.35
Mean φ (8)				37	20	26.81

No. 861. 51 Gemin. (*Con.*)

Date	h	m	s	°	′	″
1903.	h	m	s	°	′	″
Dec. 22	7	7	48.118	+16	19	24.94
24			.103			25.36
			48.111			25.15
Mean φ (2)				37	20	26.17
1904.						
Feb. 1			51.506			19.70
2			.512			19.04
			51.509			19.37
Mean φ (2)				37	20	26.46

No. 862.

Date	h	m	s	°	′	″
1903.						
Mar. 11		8	46.079	+25	3	13.65
1904.						
Jan. 15			49.741			7.00

No. 863.

Date	h	m	s	°	′	″
1904.						
Jan. 28		8	53.250	+20	40	54.17
29			.246			53.64
			53.248			53.90

No. 864.

Date	h	m	s	°	′	″
1903.						
Dec. 28		9	1.594	+23	16	41.07
29			.584			40.61
			1.589			40.84

No. 865.

Date	h	m	s	°	′	″
1903.						
Feb. 26		9	11.043	+18	43	44.36
27			.046			44.28
			11.045			44.32

No. 866.

Date	h	m	s	°	′	″
1903.						
Jan. 16		9	45.803	+22	8	6.99
Feb. 10			.740			6.97
			45.772			6.98

No. 867.

Date	h	m	s	°	′	″
1903.						
Feb. 16		9	53.829	+28	3	58.74
17			.750			58.54
			53.790			58.64

No. 868.

Date	h	m	s	°	′	″
1902.						
Feb. 4		10	59.186	+26	51	58.47
1903.						
Jan. 15		11	2.988			51.51
Feb. 4			.900			52.25
			2.944			51.88

No. 869. λ Gemin.

1903.	h	m	s	°	′	″
Mar. 11	7	12	31.189	+16	42	55.57
Mean φ (1)				37	20	27.07
1904.						
Jan. 7			34.579			49.66
11			.549			49.99
15			.593			49.58
Feb. 1			.586			49.85
2			.615			49.66
			34.584			49.75
Mean φ (5)				37	20	25.94

1904. **No. 870.**

Jan. 28		13	2.063	+24	17	33.28
29			.077			33.16
			2.070			33.22

1902. **No. 871. δ Gemin.**

Feb. 4		14	16.266	+22	9	46.29
Mean φ (1)				37	20	27.04
1903.						
Jan. 15			19.857			40.69
16			.847			40.33
Feb. 10			.921			40.02
16			.818			40.31
17			.860			40.43
20			.874			40.76
26			.824			40.19
27			.906			40.26
			19.863			40.37
Mean φ (8)				37	20	26.11
Dec. 28			.850			40.98
29			.812			40.50
			19.831			40.74
Mean φ (2)				37	20	25.36

1904. **No. 872.**

Feb. 1		14	24.248	+19	41	54.56
2			.268			54 05
			24.258			54.30

1904. **No. 873.**

Jan. 7		15	10.071	+25	50	51.52
11			.135			51.93
			10.103			51.72

1903. **No. 874.**

Mar. 11		16	13.485	+20	37	37.62
1904.						
Jan. 15			17.051			30.44

No. 875.

1903.	h	m	s	°	′	″
Feb. 26	7	17	26.446	+18	27	35.32
27			.384			35.45
			26.415			35.39

1904. **No. 876.**

Jan. 28		17	32.757	+17	35	36.23
29			.783			35.96
			32.770			36.10

1903. **No. 877.**

Dec. 28		17	33.767	+25	14	14.77
29			.784			14.13
			33.776			14.45

1904. **No. 878.**

Feb. 1		17	42.139	+23	7	49.65
2			.111			49.69
			42.125			49.67

1904. **No. 879.**

Jan. 7		18	53.178	+26	48	51.18
11			.235			51.71
			53.207			51.44

1904. **No. 880.**

Jan. 28		19	45.928	+27	59	20.58
29			.977			20.87
			45.952			20.72

1903. **No. 881.**

Feb. 26		21	6.408	+24	7	17.26
27			.423			16.63
			6 415			16.94

1903. **No. 882.**

Mar. 11		21	13.337	+20	27	6.07
1904.						
Jan. 15			16.866		26	58.95

1903. **No. 883.**

Dec. 28		21	58.941	+21	38	37.96
29			59.003			37.99
			58.972			37.98

1904. **No. 884.**

Jan. 7		22	6.844	+26	25	16.51
11			.877			16.71
			6.860			16.61

No. 885.

1904.	h	m	s	°	′	″
Feb. 1	7	22	13.495	+19	14	26.53
2			.496			26.09
			13.496			26.31

1903. **No. 886.**

Mar. 11		23	17.889	+28	19	5.69
1904.						
Jan. 15			21.671		18	58.30

1904. **Anon.**

Jan. 28		23	36.262	+27	7	31.96

1904. **No. 887.**

Jan. 29		23	50.614	+28	6	52.69
Mar. 2			.534			52.49
			50.574			52.59

1904. **No. 888.**

Feb. 1		23	58.409	+16	21	42.44
2			.435			42.23
			58.422			42.34

1903. **No. 889.**

Feb. 26		24	41.362	+20	1	7.61
27			.328			.723
			41.345			7.42

1903. **Anon.**

Dec. 28		25	55.454	+24	44	22.97
1904.						
Jan. 12			59.095			15.72

1903. **No. 890.**

Dec. 29		26	1.675	+24	42	29.01
1904.						
Jan. 14			5.256			22.00

1904. **No. 891.**

Jan. 7		26	16 327	+17	17	25.26
11			.306			27.21
			16.316			26.23

1903. **No. 892.**

Mar. 11		26	48.981	+18	34	22.95
1904.						
Jan. 15			52.465			14.91

No. 893.

1904.	h	m	s	°	′	″
Jan. 29	7	26	52.883	+21	36	45.48
Mar. 2			.869			45.41
			52.876			45.44

No. 894.

1904.						
Feb. 1		27	5.458	+23	5	33.21
2			.464			32.69
			5.461			32.95

No. 895.

1903.						
Feb. 26		27	47.444	+25	36	31.95
27			.504			32.23
			47.474			32.09

No. 896.

1904.						
Jan. 7		28	7.812	+16	2	0.04
11			.770			0.42
			7.791			0.23

No. 897.

1903.						
Mar. 11		29	56.844	+27	6	40.92
1904.						
Jan. 15		30	0.503			33.89

No. 898.

1903.						
Feb. 26		31	23.378	+20	22	32.84
27			.335			32.67
			23.356			32.75

No. 899.

1904.						
Jan. 7		31	55.100	+19	8	5.32
11			.099			5.49
			55.100			5.40

No. 900.

1903.						
Dec. 28		32	22.245	+24	34	41.64
29			.256			41.27
			22.250			41.46

No. 901.

1903.						
Mar. 11		33	22.888	+16	19	0.00
1904.						
Jan. 15			26.234		18	51.89

No. 902. f Gemin.

1904.						
Jan. 25		33	56.008	+17	53	36.43
28			.031			36.29
29			.045			36.43
			56.028			36.38
Mean φ (3)				37	20	25.46

No. 903.

1904.	h	m	s	°	′	″
Feb. 1	7	34	48.031	+19	34	47.27
2			47.911			47.25
			47.971			47.26

No. 904.

1904.						
Jan. 7		35	13.746	+23	14	26.84
11			.727			26.99
			13.736			26.92

No. 905.

1904.						
Jan. 28		35	25.590	+26	6	41.80
29			.731			42.01
			25.660			41.90

No. 906.

1903.						
Dec. 28		35	27.948	+21	40	21.37
29			.977			21.67
			27.962			21.52

No. 907.

1903.						
Feb. 26		38	11.990	+26	0	56.18
27			12.023			55.77
			12.006			55.98

No. 908. κ Gemin.

1903.						
Mar. 11		38	35.620	+24	37	51.76
Mean φ (1)				37	20	25.70
1904.						
Jan. 15			39.232			43.03
25			.210			43.09
			39.221			43.06
Mean φ (2)				37	20	25.50

No. 909. β Gemin.

1904.						
Jan. 28		39	26.578	+28	15	29.78
29			.572			30.39
			26.575			30.09
Mean φ (2)				37	20	25.74

No. 910.

1903.						
Dec. 28		39	27.729	+20	32	57.54
29			.742			57.74
			27.736			57.64

No. 911.

1904.						
Jan. 7		39	59.529	+26	57	28.22
11			.563			28.43
			59.546			28.32

No. 912.

1904.	h	m	s	°	′	″
Feb. 1	7	40	27.853	+21	21	18.10
2			.822			17.82
			27.838			17.96

No. 913.

1903.						
Feb. 26		40	30.582	+18	44	49.41
27			.551			49.10
			30.567			49.26

No. 914.

1903.						
Mar. 11		40	36.691	+16	40	27.28
1904.						
Jan. 25			40.062			18.51

No. 915.

1904.						
Jan. 28		42	49.339	+23	22	43.09
29			.358			43 78
			49.349			43.44

No. 916.

1903.						
Dec. 28		43	28.610	+24	43	52.40
29			.644			52.54
			28.627			52.47

No. 917.

1904.						
Jan. 7		45	5.962	+17	7	19.62
11			.964			19.68
			5.963			19.65

No. 918.

1904.						
Feb. 1		45	6.498	+15	5	4.07
2			.422			3.86
			6.460			3.97

No. 919.

1903.						
Feb. 26		45	5.369	+25	21	20.85
27			.243			20.92
			5.306			20.88

No. 920.

1903.						
Mar. 11		46	18.352	+19	34	25.36
1904.						
Jan. 15			21.870			16.23

No. 921.

1904.						
Jan. 28		47	18.995	+22	34	54.81
29			19.004			54.69
			19.000			54.75

	h	m	s	°	′	″
	No. 922. φ Gemin.					
1904.						
Jan. 11	7	47	37.464	+27	0	52.21
Mean φ (1)				37	20	26.39
1903.	**No. 923.**					
Dec. 28		48	26.486	+16	17	18.92
29			.440			18.74
			26.463			18.83
1904.						
Mar. 2			29.849			9.17
1904.	**No. 924.**					
Feb. 1		48	34.233	+21	21	19.60
2			.237			19.40
			34.235			19.50
1903.	**No. 925.**					
Feb. 26		49	13.375	+18	21	15.15
27			.300			14.91
			13.338			15.03
1903.	**No. 926.**					
Mar. 11		50	0.356	+20	8	25.38
1904.						
Jan. 25			3.802			15.95
1903.	**No. 927.**					
Dec. 28		50	10.706	+24	55	17.39
29			.740			17.27
			10.723			17.33
1904.	**No. 928.**					
Jan. 28		50	21.904	+23	52	39.23
29			.961			39.79
			21.933			39.51
1904.	**No. 929.**					
Jan. 7		50	57.056	+26	21	36.52
11			.157			36.53
			57.106			36.52
1904.	**No. 930.**					
Feb. 1		51	32.399	+16	2	49.07
2			.474			49.32
			32.436			49.20
1903.	**No. 931.**					
Feb. 26		52	59.574	+16	46	48.12
27			.493			47.57
			59.534			47.85
	No. 932.					
1903.						
Mar. 11	7	53	12.234	+21	24	57.93
1904.						
Jan. 25			15.724			46.83
1902.	**No. 933.** ω Cancri.					
Mar. 27		55	0.114	+25	39	39.79
28			.154			40.61
			0.134			40.20
Mean φ (2)				37	20	26.45
1904.						
Feb. 1		55	7.452			21.23
2			.493			21.52
			7.472			21.38
Mean φ (2)				37	20	25.86
1904.	**No. 934.**					
Jan. 28		55	9.235	+18	30	31.46
29			.233			31.56
			9.234			31.51
1904.	**No. 935.**					
Jan. 7		55	12.550	+20	4	46.60
11			.524			46.84
			12.537			46.72
1903.	**No. 936.**					
Dec. 28		55	13.310	+23	50	59.99
29			.365			59.87
			13.337			59.93
1902.	**No. 937.** 3 Cancri.					
Apr. 3		55	10.412	+17	34	38.87
10			.360			38.48
			10.386			38.68
Mean φ (2)				37	20	25.84
1903.	**No. 938.**					
Feb. 26		55	58.660	+16	43	22.72
27			.592			21.98
			58.626			22.35
1903.	**No. 939.**					
Mar. 11		57	14.341	+15	13	9.37
1904.						
Jan. 25			17.702			0.22
1904.	**No. 940.**					
Jan. 28		58	10.463	+22	20	24.77
29			.587			24.99
			10.525			24.88
	No. 941.					
1903.						
Dec. 29	7	58	46.936	+21	16	52.75
1904.						
Jan. 12			50.425			42.70
1904.	**No. 942.**					
Jan. 7		59	12.403	+19	6	49.70
11			.469			49.84
			12.436			49.77
1904.	**No. 943.**					
Feb. 1		59	51.580	+17	53	39.50
2			.508			40.25
			51.544			39.88
1902.	**No. 944.**					
Mar. 27	8	0	30.047	+22	54	56.30
28			.055			56.11
			30.051			56.20
1902.	**No. 945.**					
Apr. 3		1	44.935	+20	6	3.22
10			.907			3.57
			44.921			3.40
1903.	**No. 946.**					
Feb. 26		2	3.371	+24	17	57.26
27			.338			56.52
			3.354			56.89
1903.	**No. 947.**					
Mar. 11		2	3.421	+21	51	49.39
1904.						
Jan. 25			6.974			39.03
1904.	**No. 948.**					
Jan. 28		2	20.326	+24	59	34.81
29			.412			35.13
			20.369			34.97
1904.	**No. 949.**					
Feb. 1		2	32.568	+25	49	53.18
2			.545			53.02
			32.556			53.10
1903.	**No. 950.**					
Dec. 28		2	31.945	+19	29	57.99
29			.971			58.17
			31.958			58.08

		h	m	s	°	′	″
	No. 951.						
1902.							
Mar. 27		8	2	33.063	+16	41	58.34
28				.105			58.44
				33.084			58.39
1902.	**No. 952.**						
Apr. 3			3	13.901	+13	55	35.67
10				.924			35.83
				13.912			35.75
1903.	**No. 953.**						
Feb. 26			4	36.779	+25	48	7.55
27				.733			6.95
				36.756			7.25
1903.	**No. 954.**						
Mar. 11			5	32.033	+14	54	59.41
1904.							
Jan. 25				35.366			48.88
1904.	**No. 955.**						
Jan. 28			6	9.899	+16	30	8.30
29				.881			8.89
				9.890			8.60
1902.	**No. 956.** ζ **Cancri.**						
Apr. 3			6	35.553	+17	56	36.94
10				.543			36.78
				35 548			36.86
Mean φ (2)					37	20	25.99
1903.							
Dec. 28				38.979			25.48
29				39.036			25.80
				39.008			25.64
Mean φ (2)					37	20	26.13
1902.	**No. 957.**						
Mar. 27			7	53.347	+23	25	57.90
28				.397			57.33
				53.372			57.62
1903.	**No. 958.**						
Feb. 26			8	7.704	+22	34	19.82
27				.639			19.45
				7.671			19.63
1903.	**No. 959.**						
Mar. 11			8	47.579	+21	0	4.61
1904.							
Jan. 25				51.027	20	59	53.72

		h	m	s	°	′	″
	No. 960.						
1904.							
Jan. 28		8	8	58.623	+25	1	33.12
29				.658			33.84
				58.640			33.48
1904.	**No. 961.**						
Feb. 1			9	0.945	+13	20	21.10
2				.861			21.19
				0.903			21.14
1902.	**No. 962.**						
Mar. 27			10	20.034	+18	59	37.27
28				.088			37.40
				20.061			37.34
1902.	**No. 963.**						
Apr. 3			12	42.510	+15	58	55.50
10				.498			56.16
				42.504			55.83
1903.	**No. 964.**						
Feb. 26			14	25.283	+19	45	27.71
27				.193			27.47
				25.238			27.59
1903.	**No. 965.**						
Mar. 11			14	41.647	+21	3	14.09
1904.							
Jan. 25				45 158			3.10
1904.	**No. 966.**						
Jan. 28			14	49.761	+24	19	29.87
29				.834			30.49
				49.797			30.18
1904.	**No. 967.**						
Feb. 1			14	55.623	+25	38	20.98
2				.684			20.51
				55.653			20.74
1902.	**No. 968.**						
Mar. 27			15	43.302	+22	13	14.07
28				.348			12.94
				43.325			13.50
1902.	**No. 969.**						
Apr. 3			16	4.064	+23	15	49.80
10				.049			49.78
				4.056			49.79

		h	m	s	°	′	″
	No. 970.						
1903.							
Feb. 26		8	16	21.916	+17	54	35.14
27				.870			34.97
				21.893			35.06
1903.	**No. 971.**						
Mar. 11			16	29.432	+13	55	58.26
1904.							
Jan. 25				32.708			47.25
1904.	**No. 972.**						
Jan. 28			16	34.253	+15	4	24.53
29				.226			24.69
				34.240			24.61
1904.	**No. 973.**						
Feb. 1			17	6.253	+16	28	9.04
2				.213			8.71
				6.233			8.87
1902.	**No. 974.** **d$_1$ Cancri.**						
Mar. 27			17	45.205	+18	38	49.42
28				.251			49.52
				45.228			49.47
Mean φ (2)					37	20	25.80
1902.	**No. 975.**						
Apr. 3			19	8.503	+20	28	12.14
10				.553			11.76
				8.528			11.95
1903.	**No. 976.**						
Feb. 26			20	20.577	+17	21	58.21
27				.541			58.08
				20.559			58.14
1903.	**No. 977.**						
Mar. 11			20	53.797	+24	51	11.97
1904.							
Jan. 25				57.309			0.71
1904.	**No. 978.**						
Jan. 28			21	25.490	+12	58	17.75
29				.416			19 17
				25.453			18.46
1904.	**No. 979.**						
Feb. 1			21	33.476	+19	34	9.79
2				.380			9.45
				33.428			9.62

	h	m	s	°	′	″
			No. 980.			
1902.						
Mar. 27	8	21	38.985	+23	28	26.83
28			.977			26.92
			38.981			26.87
1902.			**No. 981.**			
Apr. 3		22	20.787	+16	21	24.76
10			.720			25.24
			20.753			25.00
1903.			**No. 982.**			
Feb. 26		22	28.326	+21	28	19.22
27			.308			19.14
			28.317			19.18
1903.			**No. 983.**			
Mar. 11		22	51.862	+24	28	1.49
1904.						
Jan. 25			55.404		27	50.34
1904.			**No. 984.**			
Jan. 28		23	16.006	+14	31	43.56
29			15.995			44.14
			16.000			43 85
1904.			**No. 985.**			
Feb. 1		24	19.897	+22	20	59.01
2			.813			59.40
			19.855			59.20
1902.			**No. 986.**			
Apr. 3		25	42.965	+24	24	42.90
10			.894			43.14
			42.930			43.02
1902.			**No. 987.**			
Mar. 27		26	0.557	+18	25	32.83
28			.545			33.00
			0.551			32.92
1903.			**No. 988. η Cancri.**			
Feb. 26		27	6.081	+20	46	15.44
27			.070			15.62
			6.076			15.53
Mean φ (2)				37	20	25.84
1903.			**No. 989.**			
Mar. 11		27	10.908	+16	4	6.44
1904.						
Jan. 25			14.165		3	54.08

	h	m	s	°	′	″
			No. 990.			
1904.						
Jan. 28	8	27	19.766	+24	24	41.70
29			.786			42.98
			19.776			42.34
1904.			**No. 991.**			
Feb. 1		28	24.681	+15	0	4.52
2			.531			4.89
			24.606			4.70
1902.			**No. 992.**			
Mar. 27		28	19.383	+13	35	33.49
28			.416			33.90
			19.400			33.70
1902.			**No. 993.**			
Apr. 3		30	38.092	+15	39	10.32
10			.030			10.20
			38.061			10.26
1903.			**No. 994.**			
Feb. 26		31	0.290	+22	30	34.83
27			.249			34.62
			0.270			34.72
1903.			**No. 995.**			
Mar. 11		31	7.917	+18	48	20.13
1904.						
Jan. 25			11.400			7.66
1904.			**No. 996.**			
Jan. 28		32	50.954	+20	32	34.94
29			51.028			36.17
			50.991			35.56
1904.			**No. 997.**			
Feb. 1		33	3.089	+17	23	45.26
2			2.904			44.39
			2.996			44.82
1902.			**No. 998.**			
Mar. 27		32	59.627	+24	1	59.54
28			.665			59.34
			59 646			59.44
1902.			**No. 999.**			
Apr. 3		34	43.343	+19	41	43.22
10			.365			43.32
			43.354			43.27

	h	m	s	°	′	″
			No. 1000.			
1901.						
Feb. 26	8	35	12.489	+14	43	20.29
27			.520			20.73
			12.504			20.51
1903.			**No. 1001.**			
Mar. 11		37	26.518	+16	47	51.04
1904.						
Jan. 25			29.821			38.59
1904.			**No. 1002. γ Cancri.**			
Jan. 28		37	44.003	+21	48	50.32
29			.003			50.78
Feb. 1			43.951			50.81
2			.974			50.67
			43.983			50.64
Mean φ (4)				37	20	25.64
1902.			**No. 1003.**			
Mar. 27		37	18 419	+13	1	57.57
28			43.318			57.01
			48.419			57.29
1903.			**No. 1004. δ Cancri.**			
Mar. 11		39	10.475	+18	30	40.15
Mean φ(1)				37	20	26.04
1904.						
Jan. 25			13.880			26.42
Mean φ (1)				37	20	26.33
1902.			**No. 1005.**			
Apr. 3		40	12.242	+20	22	49.12
10			.178			49.06
			12.210			49.09
1903.			**No. 1006.**			
Feb. 26		40	48.876	+14	24	57.36
27			.862			57.72
			48.869			57.54
1904.			**No. 1007.**			
Jan. 28		40	53.921	+22	42	9.99
29			54.048			9.92
			53 984			9.96
1902.			**No. 1008.**			
Mar. 27		40	50.110	+16	23	37.78
28			.183			37.94
			50.146			37.86

No. 1009.

1904.	h	m	s	°	′	″
Feb. 1	8	41	40.333	+12	27	44.85
2			.414			45.16
			40.374			45.00

No. 1010.

1902.						
Apr. 3		42	34.086	+17	45	21.12
10			.075			21.78
			34.080			21.45

No. 1011.

1903.						
Feb. 26		45	13.937	+19	11	39.32
27			.960			38.49
			13.949			38.90

No. 1012.

1903.						
Mar. 11		45	37.426	+15	42	37.82
1904.						
Jan. 25			40.807			24.78

No. 1[illegible]3.

1902.						
Apr. 3		45	43.789	+21	26	49.17
10			.828			49.67
			43.808			49.42

No. 1014.

1902.						
Mar. 27		47	0.541	+13	36	14.24
28			.518			13.96
			0.530			14.10

No. 1015.

1903.						
Mar. 11		48	22.559	+20	20	3.00
1904.						
Jan. 25			25.960		19	49.50

No. 1016.

1903.						
Feb. 26		48	24.140	+14	11	50.13
27			.121			50.22
			24.130			50.17

No. 1017.

1902.						
Apr. 3		48	38.833	+22	35	18.30
10			.820			18.54
			38.826			18.42

No. 1018.

1904.						
Jan. 28		49	58.516	+17	35	48.67
29			.437			49.02
			58.476			48.84

No. 1019.

1904.	h	m	s	°	′	″
Feb. 1	8	50	41.083	+11	59	35.78
2			.107			35.46
			41.095			35.62

No. 1020.

1903.						
Mar. 11		51	50.422	+15	41	41.35
1904.						
Jan. 25			53.716			28.24

No. 1021.

1902.						
Mar. 27		52	6 865	+15	57	27.90
28			.861			27.76
			6.863			27.83

No. 1022.

1902.						
Apr. 10		52	20.880	+19	39	40.97
1904.						
Mar. 2			27.699			13.38

No. 1023.

1904.						
Jan. 28		52	52.496	+18	40	46.08
29			.482			46.29
			52.489			46.19

No. 1024. *α* **Cancri.**

1903.						
Feb. 26		53	10.968	+12	14	0.21
27			.986			0.18
Apr. 22			.954			0.31
23			11.010			0.42
			10.980			0.28
Mean φ (4)				37	20	26.04
1904.						
Apr. 11			14.249		13	46.34
12			.257			47.14
13			.291			47.34
17			.212			46.79
			14.252			46.90
Mean φ (4)				37	20	25.60

No. 1025.

1904.						
Feb. 1		53	25.169	+21	32	20.52
2			.165			20.48
			25.167			20.50

No. 1026.

1902.						
Mar. 27		54	3.655	+13	27	18.03
28			.695			18.00
			3.675			18.02

No. 1027.

1902.	h	m	s	°	′	″
Apr. 3	8	56	13.738	+17	27	56.16
10			.693			56 21
			13.716			56.18

No. 1028.

1903.						
Feb. 26		56	40.327	+14	58	47.35
27			.329			47.15
			40.328			47.25

No. 1029.

1902.						
Mar. 27		57	7.127	+21	54	17.30
28			.182			17.14
			7.155			17.22

No. 1030.

1903.						
Mar. 11		57	47.827	+22	59	40.75
1904.						
Jan. 25			51.337			25.72

No. 1031.

1904.						
Jan. 28		58	57.191	+18	39	34.72
29			.118			35.40
			57.154			35.06

No. 1032.

1904.						
Feb. 1		59	15.014	+12	35	59.93
2			.012			59.92
			15.013			59.92

No. 1033.

1902.						
Apr. 3		59	55.396	+19	49	36.96
10			.456			36.91
			55.426			36.93

No. 1034.

1902.						
Mar. 27	9	0	45.247	+16	15	13.55
28			.259			14.31
			45.253			13.93

No. 1035.

1904.						
Feb. 1		1	14.782	+20	53	57.22
2			.579			57.52
			14.680			57.37

No. 1036.

1903.						
Apr. 22		1	51.487	+23	22	13.06
23			.556			13.68
			51.522			13.37

No. 1037. ϰ Cancri.

1903.	h	m	s	°	′	″
Feb. 26	9	2	29.706	+11	3	31.37
27			.728			31.43
Mar. 11			.652			31.49
			29.695			31.43
Mean φ (3)				37	20	26.34
1904.						
Jan. 25			32.942			16.82
28			.932			16.86
29			.968			16.86
Apr. 11			.912			17.36
12			.888			17.59
			32.928			17.10
Mean φ (5)				37	20	25.94

1904. **No. 1038.**

Apr. 13		2	49.869	+15	5	54.62
17			.908			54.85
23			.926			54.72
			49.901			54.73

1902. **No. 1039.**

Apr. 3		3	5.785	+17	5	50.54
10			.758			50.99
			5.772			50 76

1902. **No. 1040. ξ Cancri.**

Mar. 27		3	43.572	+22	26	31.31
28			.532			31.17
			43.552			31.24
Mean φ (2)				37	20	26.19

1904. **No. 1041.**

Feb. 1		4	33.314	+11	57	20.64
2			.355			20.18
Mar. 2			.433			20.49
			33.367			20.44

1903. **No. 1042.**

Apr. 22		4	46.598	+22	23	26.04
23			.611			26.20
			46.604			26.12

1904. **No. 1043.**

Jan. 28		5	28.145	+19	16	46.03
29			.250			47.23
			28.198			46.63

1902. **No. 1044.**

Apr. 3		6	3.914	+13	17	28.59
10			.910			28.47
			3.912			28.53

No. 1045.

1904.	h	m	s	°	′	″
Apr. 11	9	6	18.269	+20	44	47.64
12			.256			48.39
			18.263			48.02

1904. **No. 1046.**

Apr. 17		6	17.833	+9	22	8.98
23			.942			8.99
			17.887			8.99

1902. **No. 1047.**

Mar. 27		6	26.730	+18	26	44.80
28			.773			44.72
			26.752			44.76

1903. **No. 1048.**

Apr. 22		8	4.968	+21	40	58.63
23			.973			59.44
			4.970			59.03

1904. **No. 1049.**

Feb. 1		8	12.816	+10	42	8.32
2			.729			8.03
			12.773			8.18

1902. **No. 1050.**

Apr. 3		9	31.267	+16	24	39.12
10			.301			39.00
			31.284			39.06

1904. **No. 1051.**

Jan. 28		9	55.989	+15	20	23.47
29			.953			23.94
			55.971			23.70

1904. **No. 1052.**

Apr. 11		10	37.802	+20	28	22.23
12			.890			22.70
			37.846			22.46

1904. **No. 1053.**

Apr. 17		11	3.895	+19	12	38.87
23			.889			38.41
			3.892			38.64

1904. **No. 1054.**

Jan. 28		12	6.862	+13	29	0.30
29			.811			0.31
			6.836			0.30

No. 1055.

1904.	h	m	s	°	′	″
Feb. 1	9	12	14.496	+23	28	51.54
2			.524			52.05
			14.510			51.80

1902. **No. 1056.**

Mar. 27		12	10.805	+17	6	54.90
28			.729			54.70
			10.767			54.80

1902. **No. 1057.**

Apr. 3		12	32.438	+11	54	42.30
10			.417			42.59
			32.427			42.44

1904. **No. 1058.**

Apr. 11		12	43.793	+ 8	20	54.26
12			.806			54.88
			43.800			54.57

1903. **No. 1059. 83 Cancri.**

Apr. 22		13	34.104	+18	7	0.26
23			.131			0.73
			34.118			0.49
Mean φ (2)				37	20	25.83
1904.						
Apr. 13			37.484		6	45.67
17			.495			45.87
23			.467			45.85
			37.482			45.80
Mean φ (3)				37	20	25.73

1902. **No. 1060.**

Mar. 27		14	14.424	+10	12	11.56
28			.418			11.31
			14.421			11.44

1902. **No. 1061.**

Apr. 3		15	50.780	+15	47	14.37
10			.814			14.96
			50.797			14.66

1903. **No. 1062.**

Apr. 22		16	0.837	+13	31	31.24
23			.835			32.27
			0.836			31.76

			No. 1063.			
1904.	h	m	s	°	′	″
Feb. 1	9	16	5.551	+17	0	25.35
2			.371			25.63
			5.461			25.49
1904.			**No. 1064.**			
Jan. 28		16	24.046	+19	9	26.60
29			.126			27.03
			24.086			26.81
1904.			**No. 1065.**			
Apr. 11		16	31.261	+21	54	25.39
12			.302			25.62
			31.281			25.50
1902.			**No. 1066.**			
Mar. 27		18	15.595	+20	46	58.98
28			.522			58.49
			15.558			58.74
1904.			**No. 1067.**			
Apr. 13		18	29.863	+11	28	26.60
17			.854			26.77
23			30.052			27.28
			29.923			26.88
1902.			**No. 1068.**			
Apr. 3		19	2.609	+18	33	47.37
10			.608			47.16
			2.608			47.27
1903.			**No. 1069.**			
Apr. 22		19	17.845	+20	12	23.43
23			.879			23.65
			17.862			23.54
1904.			**No. 1070.**			
Feb. 1		19	52.313	+10	49	43.34
2			.207			43.69
			52.260			43.51
1904.			**No. 1071.**			
Jan. 28		21	40.949	+14	43	12.36
29			.963			12.79
			40.956			12.57
1904.			**No. 1072.**			
Apr. 11		23	19.044	+9	28	30.09
12			.043			30.43
			19.043			30.26

			No. 1073.			
1902.	h	m	s	°	′	″
Mar. 27	9	23	14.659	+12	48	45.32
28			.599			45.41
			14.629			45.37
1902.			**No. 1074.**			
Apr. 3		23	16.160	+8	36	58.15
10			.163			58.57
			16.161			58.36
1903.			**No. 1075.**			
Apr. 22		23	33.897	+19	42	38.58
23			.887			39.06
			33.892			38.82
1904.			**No. 1076.**			
Feb. 1		23	57.326	+21	20	2.04
2			.152			2.10
			57.239			2.07
1904.			**No. 1077.**			
Jan. 28		24	12.402	+18	4	17.55
29			.428			17.34
			12.415			17.44
1904.			**No. 1078.**			
Apr. 13		24	56.934	+22	14	3.14
17			.839			3.08
23			.900			3.16
			56.891			3.13
1904.			**No. 1079.**			
Apr. 11		25	27.491	+13	55	6.55
12			.494			6.19
			27.492			6.37
1902.			**No. 1080.**			
Mar. 27		26	13.589	+20	26	23.07
28			.519			23.19
			13.554			23.13
1902.			**No. 1081.**			
Apr. 3		26	15.037	+16	12	5.50
10			.074			6.27
			15.055			5.89

			No. 1082. ξ Leonis.			
1904.	h	m	s	°	′	″
Feb. 2	9	26	46.287	+11	43	30.74
Apr. 13			.341			29.88
17			.373			30.53
23			.350			29.94
			46.338			30.27
Mean φ (4)				37	20	26.59
1903.			**No. 1083.**			
Apr. 22		26	45.631	+10	8	37.21
23			.703			37.63
			45.667			37.42
1904.			**No. 1084.**			
Jan. 28		27	27.388	+7	29	15.27
29			.499			16.07
			27.444			15.67
1902.			**No. 1085.**			
Mar. 27		29	28.672	+8	37	24.63
28			.631			24.69
			28.652			24.66
1902.			**No. 1086.**			
Apr. 3		29	40.652	+13	5	29.49
10			.615			29.87
			40.633			29.68
1903.			**No. 1087.**			
Apr. 22		30	35.423	+20	28	43.18
23			.456			43.24
			35.440			43.21
1904.			**No. 1088.**			
Feb. 2		30	39.978	+10	17	52.81
Mar. 2			.998			52.88
			39.988			52.84
1904.			**No. 1089.**			
Jan. 28		31	4.473	+19	21	28.68
29			.648			29.06
			4.560			28.87
1904.			**No. 1090.**			
Apr. 13		31	44.891	+16	52	6.25
17			.931			6.29
			44.911			6.27

No. 1091.

1904.	h	m	s	°	′	″
Apr. 11	9	32	8.638	+ 7	16	0.27
12			.676		15	59.47
			8.657		15	59.87

No. 1092.

1902.						
Mar. 27		32	38.921	+17	47	50.74
28			.920			50.58
			38.921			50.66

No. 1093.

1902.						
Apr. 3		32	40.516	+14	47	24.50
10			.447			24.59
			40.481			24.54

No. 1094. P 135.

1903.						
Apr. 22		33	28.214	+20	44	6.68
23			.226			6.47
			28.220			6.58
Mean φ (2)				37	20	26.24
1904.						
Apr. 23			31.627		43	51.64
Mean φ (1)				37	20	25.86

No. 1095.

1904.						
Apr. 13		33	36.530	+11	12	43.29
17			.530			44.29
			36.530			43.79

No. 1096.

1904.						
Feb. 1		34	23.405	+12	36	2.05
2			.339			1.17
			23.372			1.61

No. 1097.

1904.						
Jan. 29		35	22.510	+13	29	30.85
Mar. 31			.514			30.92
			22.512			30.88

No. 1098. *o* Leonis.

1902.						
Apr. 3		35	55.263	+10	20	17.66
10			.284			17.71
			55.273			17.68
Mean φ (2)				37	20	26.51
1904.						
Apr. 23		36	1.717		19	44.99
Mean φ (1)				37	20	27.49

No. 1099.

1904.						
Apr. 11		36	7.703	+ 9	25	57.70
12			.745			57.50
			7.724			57.60

No. 1100.

1903.	h	m	s	°	′	″
Apr. 22	9	36	26.725	+16	11	47.45
23			.784			46.70
			26.755			47.07

No. 1101.

1904.						
Apr. 13		37	0.987	+17	31	10.45
17			.953			11.06
			0.970			10.76

No. 1102.

1904						
Feb. 1		38	0.093	+20	37	56.22
2		37	59.949			55.84
		38	0.021			56.03

No. 1103. ψ Leonis.

1902.						
Mar. 27		38	23.782	+14	28	12.56
28			.763			12.58
			23.773			12.57
Mean φ (2)				37	20	25.76

No. 1104.

1904.						
Jan. 28		39	9.638	+19	18	18.74
29			.883			19.75
			9.760			19.24

No. 1105.

1902.						
Apr. 3		40	43.900	+13	54	6.54
10			.940			6.59
			43.920			6.56

No. 1106.

1903.						
Apr. 22		41	3.117	+ 7	9	23.41
23			.080			23.35
			3 099			23.38

No. 1107.

1904.						
Feb. 1		41	13.117	+12	15	9.06
2			.053			8.84
			13.085			8.95

No. 1108.

1904.						
Jan. 28		42	10.906	+ 9	0	55.51
29			11.073			55.75
			10.990			55.63

No. 1109.

1904.						
Apr. 11		42	23.753	+11	52	26 91
12			.827			27.27
			23.790			27.09

No. 1110.

1902.	h	m	s	°	′	″
Mar. 27	9	42	31.755	+10	31	44.62
28			.709			44.08
			31.732			44.35

No. 1111.

1902.						
Apr. 3		43	40.694	+18	30	48.75
10			.754			49.21
			40.724			48.98

No. 1112.

1903.						
Apr. 22		43	55.346	+15	24	32.35
23			.364			31.91
			55 355			32.13

No. 1113.

1902.						
Mar. 27		45	26.640	+19	46	53.61
28			.621			53.23
			26.630			53.42

No. 1114. 23 Leonis.

1904.						
Jan. 28		45	50.345	+13	30	54.63
29			.355			55.05
Apr. 13			.423			54.13
17			.440			55.75
			50.391			54.89
Mean φ (4)				37	20	25.72

No 1115.

1904.						
Feb. 1		45	58.128	+16	46	9.45
2			57.899			9 32
			58.014			9.38

No. 1116

1902.						
Apr. 3		47	57.541	+10	4	9 57
10			.553			9.83
			57.547			9.70

No. 1117.

1904.						
Apr. 11		48	12.190	+11	37	22.80
12			.088			22.90
			12.139			22.85

No. 1118.

1904.						
Feb. 1		48	40.495	+ 6	24	39.02
2			.534			40.49
			40.514			39 76

No. 1119.

1904.	h	m	s	°	′	″
Jan. 28	9	49	1.663	+ 8	31	40.30
29			.856			40.57
			1.760			40.44

No. 1120.

1902.						
Mar. 27		50	32.901	+18	0	24.75
28			.878			24.67
			32.890			24.71

No. 1121.

1904.						
Apr. 13.		51	20 678	+ 9	23	17.41
17			.715			18.74
			20.697			18.07

No. 1122.

1903.						
Apr. 22		51	21.258	+15	11	17.48
23			.262			17.13
			21.260			17.30

No. 1123.

1904.						
Feb. 1		52	4.708	+19	44	46.62
2			.589			46.22
			4.648			46.42

No. 1124.

1904.						
Jan. 28		52	18.847	+16	54	57.75
29			.820			58.10
			18.833			57.92

No. 1125.

1904.						
Apr. 11		52	41.586	+14	3	50.65
12			.538			51.53
			41.562			51.09

No. 1126.

1904.						
Apr. 13		53	2.548	+ 8	46	21.11
17			.540			21.90
			2.544			21.50

No. 1127. ν Leonis.

1902.						
Mar. 27		52	57.117	+12	54	45.02
28			.181			44.58
Apr. 3			.105			44.71
10			.174			44.97
14			.135			44.41
15			.076			44.42
			57.131			44.68
Mean φ (6)				37	20	25.71

No. 1128.

1903.	h	m	s	°	′	″
Apr. 22	9	53	35.152	+10	55	15.87
23			.177			16.34
			35.164			16.10

No. 1129. π Leonis.

1903.						
Apr. 24		55	5.330	+ 8	30	35.48
27			.300			35.31
May 1			.296			34.78
4			. . .			35.78
			5.309			35.34
Mean φ (4)				37	20	26.10
1904.						
Feb. 1			8.463			18.33
2			.512			18.78
			8.487			18 56
Mean φ (2)				37	20	25.42

No. 1130.

1902.						
Apr. 3		55	5.167	+ 6	43	11.64
10			.184			12.46
			5.175			12.05

No. 1131.

1904.						
Jan. 28		55	26.274	+18	1	36.58
29			.249			36.74
			26.261			36.66

No. 1132.

1904.						
Apr. 11		55	55.656	+ 9	24	45.07
12			.663			44.82
			55.660			44.94

No. 1133.

1902.						
Apr. 14		55	50.738	+ 5	27	59.08
15			.766			59.30
			50.752			59.19

No. 1134.

1902.						
Mar. 27		56	4.455	+14	23	54.46
28			.376			54.40
			4.415			54.43

No. 1135.

1902.						
Apr. 3		58	20.568	+10	22	22.50
10			.618			22.84
			20.593			22.67

No. 1136.

1903.	h	m	s	°	′	″
Apr. 22	9	58	33.820	+19	25	18.23
23			.820			18.40
			33.820			18.32

No. 1137.

1902.						
Apr. 14		58	53.555	+12	6	9.61
15			.566			9.33
			53.560			9.47

No. 1138.

1904.						
Jan. 28		59	46.827	+ 5	28	11.19
29			.912			10.80
			46.870			11.00

No. 1139.

1902.						
Mar. 27		59	53.735	+ 8	27	57.88
28			.803			58.32
			53.769			58.10

No. 1140.

1904.						
Apr. 13	10	0	28.471	+16	13	27.69
17			.446			28.43
			28.458			28.06

No. 1141.

1903.						
Apr. 24		1	24.615	+13	15	17.62
27			.589			17.62
			24.602			17.62

No. 1142.

1903.						
May 1		1	28.929	+ 3	56	56.44
4			.931			56.46
			28.930			56.45

No. 1143.

1904.						
Apr. 11		1	46.300	+ 6	4	47.05
12			.251			47.56
			46.276			47.30

No. 1144.

1903.						
Apr. 22		1	48.223	+14	37	52.33
23			.274			52.12
			48.249			52.22

No. 1145. η Leonis.

1904.						
Feb. 1		2	6.073	+17	13	51.73
2			5.927			51.62
			6.000			51.68
Mean φ (2)				37	20	25.86

No. 1146.

1904.	h	m	s	°	′	″
Apr. 13	10	2	27.645	+15	37	43.02
17			.677			43.88
			27.661			43.45

No. 1147.

1903.						
Apr. 24		2	45.486	+10	28	23.36
27			.474			23.87
			45.480			23.62

No. 1148. *α* **Leonis.**

1902.						
Mar. 27		3	9.254	+12	26	46.94
28			.204			46.71
Apr. 3			.275			46.82
10			.265			46.80
14			.219			46.40
15			.258			46.54
			9.246			46.70
Mean φ (6)				37	20	26.14
1904.						
Jan. 28			......			11.98
29			15.566			12.00
						11.99
Mean φ (2)				37	20	25.27

No. 1149.

1903.						
May 1		4	9.960	+6	38	47.14
4			10.032			47.38
			9.996			47.26

No. 1150.

1904.						
Apr. 11		4	52.553	+18	39	55.31
12			.620			55.42
			52.586			55.37

No. 1151.

1904.						
Apr. 13		5	45.773	+14	57	19.46
17			.753			20.00
			45.763			19.73

No. 1152.

1903.						
Apr. 22		5	48.176	+8	10	20.80
23			.172			20.99
			48.174			20.90

No. 1153.

1902.						
Mar. 27		6	22.073	+13	50	20.72
28			.045			20.65
			22.059			20.68

No. 1154.

1902.	h	m	s	°	′	″
Apr. 3	10	6	27.647	+17	45	31.46
10			.592			32.09
			27.619			31.78

No. 1155. 19 Sex.

1903.						
Apr. 24		7	45.520	+5	5	39.63
27			.504			39.67
			45.512			39.65
Mean φ (2)				37	20	25.58
1904.						
Jan. 28			48.651			22.23
29			.701			21.38
Feb. 1			.602			21.38
2			.673			21.74
			48.657			21.68
Mean φ (4)				37	20	25.44

No. 1156.

1902.						
Apr. 14		8	9.226	+3	33	29.34
15			.223			29.71
			9.225			29.53

No. 1157.

1903.						
May 1		8	21.996	+9	39	58.56
4			.952			58.93
			21.974			58.74

No. 1158.

1904.						
Apr. 11		8	43.856	+11	19	1.99
12			.830			2.64
			43.843			2.32

No. 1159.

1904.						
Apr. 13		9	19.527	+16	36	52.88
17			.459			53.32
			19.493			53.10

No. 1160.

1902.						
Mar. 27		9	36.192	+6	14	10.79
28			.163			10.87
			36.177			10.83

No. 1161.

1903.						
Apr. 22		9	59.467	+12	9	21.59
23			.447			22.15
			59.457			21.87

No. 1162.

1902.	h	m	s	°	′	″
Apr. 14	10	10	34 292	+7	24	48.18
15			.240			48.16
			34.266			48.17

No. 1163.

1902.						
Apr. 3		11	25.180	+14	13	1.45
10			.184			1.64
			25.182			1.54

No. 1164.

1903.						
Apr. 24		11	48.980	+8	43	46.27
27			49.003			46.98
			48.992			46.63

No. 1165.

1902.						
Mar. 27		13	8.749	+13	6	44.53
28			.756			44.66
			8.752			44.60

No. 1166.

1903.						
May 1		13	41.269	+18	11	31.84
4			.291			32.11
			41.280			31.97

No. 1167.

1902.						
Apr. 14		14	16.458	+10	24	42.18
15			.457			42.36
			16.458			42.27

No. 1168.

1902.						
Apr. 3		15	10.168	+8	10	53.56
10			.200			54.07
			10.184			53.82

No. 1169.

1904.						
Apr. 11		15	20.114	+11	50	7.02
12			.138			7.17
			20.126			7.10

No. 1170.

1904.						
Apr. 13		15	32.274	+4	6	20.10
17			.189			20.29
			32.231			20.20

No. 1171.

1903.						
Apr. 22		15	39.845	+5	8	7.80
23			.867			8.10
			39.856			7.95

No. 1172.

1903.	h	m	s	°	′	″
Apr. 24	10	16	1.529	+ 2	46	40.09
27			.549			40.49
			1.539			40.29

No. 1173. 42 Leonis.

1902.						
Mar. 27		16	34.202	+15	28	10.96
28			.156			10.91
			34.179			10.94

No. 1174.

1903.						
May 1		16	44.679	+11	11	21.31
4			.682			20.69
			44.680			21.00

No. 1175.

1904.						
Apr. 11		17	10.525	+ 9	26	55.52
12			.542			55.45
			10.534			55.48

No. 1176.

1902.						
Apr. 14		17	16.694	+17	14	10.68
15			.718			10.62
			16.706			10.65

No. 1177.

1904.						
Apr. 13		17	59.160	+ 7	1	48.45
17			.125			49.27
			59.142			48.86

No. 1178.

1902.						
Apr. 3		18	10.543	+14	24	3.48
10			.530			3.83
			10.536			3.66

No. 1179.

1902.						
Mar. 27		19	45.317	+13	13	37.34
28			.280			37.50
			45.298			37.42

No. 1180.

1903.						
Apr. 22		20	8.537	+ 9	16	40.93
23			.587			40.94
			8.562			40.94

No. 1181.

1902.						
Apr. 14		20	15.251	+ 5	40	27.26
15			.247			27.17
			15.249			27.21

No. 1182.

1903.	h	m	s	°	′	″
Apr. 24	10	21	7.309	+ 4	25	32.13
27			.227			32.59
			7.268			32.36

h.

1902.						
Apr. 3		21	31.164	+14	7	31.70
10			.149			32.47
			31.156			32.09

No. 1183.

1903.						
May 1		22	3.646	+11	48	38.80
4			.655			38.17
			3.650			38.49

No. 1184.

1904.						
Apr. 11		22	24.191	+ 7	42	20.30
12			.174			21.23
			24.183			20.76

No. 1185.

1904.						
Apr. 13		22	34.829	+10	15	6.09
17			.824			6.44
			34.826			6.26

No. 1186.

1902.						
Mar. 27		23	10.324	+15	15	15.31
28			.331			14.75
			10.327			15.03

No. 1187.

1902.						
Apr. 14		23	11.055	+16	15	21.13
15			.084			21.43
			11.070			21.28

No. 1188.

1903.						
Apr. 22		23	29.418	+17	37	43.44
23			.473			43.38
			29.446			43.41

No. 1189.

1903.						
Apr. 24		23	57.904	+ 3	8	38.64
27			.868			38.45
			57.886			38.55

No. 1190.

1903.						
May 1		24	45 293	+ 8	32	28.15
4			.331			27.95
			45.312			28.05

No. 1191.

1904.	h	m	s	°	′	″
Apr. 11	10	25	26.219	+ 7	33	5.23
12			.251			.470
			26.235			4.96

No. 1192.

1904.						
Apr. 13		26	1.204	+ 5	50	1.95
17			.106			2.66
			1.155			2.30

No. 1193.

1903.						
Apr. 22		26	24.518	+11	39	59.03
23			.496			59.49
			24.507			59.26

No. 1194.

1902.						
Mar. 27		26	57.919	+14	38	24.86
28			.953			25.41
			57.936			25.13

No. 1195.

1902.						
Apr. 3		27	4.575	+13	25	23.20
10			.564			23.44
			4.570			23.32

No. 1196. ρ Leonis.

1903.						
May 1		27	42.248	+ 9	48	21.26
4			.270			20.86
			42.259			21.06
Mean φ (2)				37	20	26.50

o.

1902.						
Apr. 14		28	18.342	+15	43	8.53
15			.399			8.76
			18.370			8.64

No. 1197.

1903.						
Apr. 24		29	16.730	+ 4	36	44.90
27			.719			44.68
			16.724			44.79

No. 1198.

1904.						
Apr. 11		29	47.579	+ 7	26	53.46
12			.543			53.18
			47.561			53.32

No. 1199.

1904.						
Apr. 13		30	0.015	+ 9	8	47.27
17			.040			47.61
			0.027			47.44

No. 1200.

1903.	h	m	s	°	'	"
Apr. 22	10	30	6.104	+ 2	42	21.28
23			.146			21.18
			6.125			21.23

No. 1201.

1902.						
Apr. 3		31	31.455	+11	31	54.94
10			.430			55.09
			31.442			55.01

No. 1202.

1902.						
Mar. 27		31	49.527	+13	22	30.08
28			.511			30.18
			49.519			30.13

No. 1203.

1902.						
Apr. 14		32	3.198	+ 9	53	1.22
15			.173			1.36
			3.185			1.29

No. 1204.

1903.						
Apr. 24		33	24.553	+ 6	25	4.92
27			.591			5.61
			24.572			5.27

No. 1205. 50 Leonis.

1903.						
Apr. 22		33	42.505	+16	37	56.69
23			.461			56.81
May 1			.476			56.84
4			.487			56.53
			42.482			56.72
Mean φ (4)				37	20	26.21
1904.						
Apr. 11			45.634			38.73
12			.692			38.06
13			.660			37.63
17			.678			38.25
			45.666			38.17
Mean φ (4)				37	20	26.02

No. 1206.

1902.						
Apr. 3		33	56.371	+15	14	32.69
10			.406			33.05
			56.388			32.87

No. 1207.

1902.						
Apr. 14		35	15.715	+ 5	3	4.02
15			.707			4.24
			15.711			4.13

No. 1208.

1902.	h	m	s	°	'	"
Mar. 27	10	35	26.327	+12	35	22.52
28			.297			22.69
			26.312			22.60

No. 1209.

1903.						
May 1		36	18.589	+ 9	4	10.26
4			.560			10.33
			18.574			10.30

No. 1210.

1904.						
Apr. 11		36	37.975	+ 7	32	13.72
12			.891			14 05
			37.933			13.88

s.

1902.						
Apr. 3		36	53.204	+13	59	3.24
10			.264			1.96
			53.234			2.60

No. 1211.

1904.						
Apr. 13		37	13.690	+10	51	28.49
17			.626			29.02
			13.658			28.76

No. 1212.

1903.						
Apr. 22		37	23.060	+ 1	22	10.18
23			.145			10.47
			23.102			10.33

No. 1213. 34 Sex.

1903.						
Apr. 24		37	37.004	+ 4	5	24.19
27			.010			24.24
			37.007			24.22
Mean φ (2)				37	20	26.40

No. 1214.

1902.						
Apr. 14		38	15.743	+ 5	15	43.42
15			.674			43.66
			15.709			43.54

No. 1215.

1903.						
May 1		40	9.597	+ 2	59	54.42
4			.621			53.88
			9.609			54.15

No. 1216. 37 Sex.

1904.						
Apr. 11		41	5.834	+ 6	52	45.28
12			.828			45.79
			5.831			45.53
Mean φ (2)				37	20	25.54

No. 1217.

1902.	h	m	s	°	'	"
Apr. 14	10	41	7.734	+10	2	3.14
15			.774			2.83
			7.754			2.98

No. 1218.

1902.						
Mar. 27		41	8.265	+13	15	51.67
28			.277			52.01
			8.271			51.84

No. 1219.

1902.						
Apr. 3		41	13.889	+14	42	43.44
10			.917			44.09
			13.903			43.77

No. 1220.

1903.						
Apr. 22		41	30.314	+11	41	54.02
23			.332			54.25
			30.323			54 14

No. 1221.

1903.						
Apr. 24		41	32.959	+ 5	9	37.84
27			.956			37.98
			32.957			37.91

No. 1222.

1904.						
Apr. 13		43	43.076	+ 8	43	40.23
17			.037			39.77
			43.057			40.00

No. 1223.

1904.						
Apr. 11		43	52.736	+ 1	54	36.93
12			.748			37.19
			52.742			37.06

No. 1224. 1 Leonis.

1902.						
Mar. 27		44	6.431	+11	3	49.27
28			.387			49.75
Apr. 3			.385			49.93
10			.408			50.04
14			.402			49.47
15			.390			49.58
			6.401			49 67
Mean φ (6)				37	20	26.10

No. 1225.

1904.						
Apr. 13		45	59.412	+ 4	5	57.63
17			.384			57.71
			59.398			57.67

No. 1226.

1903.	h	m	s	°	′	″
Apr. 22	10	46	2.666	+12	5	37.56
23			.655			37.51
			2.660			37.54

No. 1227.

1903.						
Apr. 24		46	8 696	+7	16	40.08
27			.669			39.76
			8.683			39.92

No. 1228.

1903.						
May 1		46	14.422	+9	39	51.63
4			.355			51.43
			14.388			51.53

No. 1229.

1904.						
Apr. 11		47	10.357	+7	58	17.31
12			(10.23)			17.79
24			10.336			18.18
			10.346			17.76

No. 1230.

1902.						
Mar. 27		47	11.614	+1	32	43.83
28			.644			43.42
			11.629			43.63

No. 1231.

1902.						
Apr. 3		47	31.637	+5	31	26.84
10			.563			27.69
			31.600			27.26

No. 1232.

1902.						
Apr. 14		47	34.919	+0	19	10.66
15			.914			10.55
			34.916			10.60

No. 1233.

1904.						
Apr. 13		48	54.974	+3	10	9.91
17			.944			10.62
			54.959			10.26

No 1234.

1903.						
Apr. 22		49	11.115	+12	53	15.73
23			.139			16.46
			11.127			16.10

No. 1235.

1902.						
Mar. 27		50	39.880	+1	15	34.62
28			.936			34.51
			39.908			34.56

No. 1236.

1902	h	m	s	°	′	″
Apr. 3	10	50	42.350	+10	38	44.59
10			.314			44.82
			42.332			44.70

No. 1237.

1902.						
Apr. 14		50	56.216	+6	42	30.58
15			.170			30 16
			56.193			30.37

No. 1238.

1903.						
Apr. 24		51	37.871	+14	4	35.12
27			.811			35.11
			37.841			35.12

No. 1239.

1903.						
May 1		51	43.112	-0	39	1.13
4			.147			0.88
			43.130			1.00

No. 1240.

1904.						
Apr. 11		52	13.628	+0	12	7.75
12			595			6.90
			13.612			7.32

No. 1241.

1902.						
Mar. 27		53	45.548	+2	15	18.63
28			.568			19.02
			45.558			18.83

No. 1242.

1902.						
Apr. 3		54	25.840	+10	27	22.20
10			.825			22.49
			25.832			22.34

No. 1243.

1902.						
Apr. 14		54	26.696	+7	45	3.12
15			.736			2.93
			26.716			3 02

No. 1244.

1904.						
Apr. 13		54	36.987	+4	52	6.95
17			.905			6.79
			36.946			6.87

No. 1245.

1903.						
Apr. 24		54	37.131	+12	13	28.45
27			.053			28.97
			37.092			28.71

No. 1246. d Leonis.

1902.	h	m	s	°	′	″
May 8	10	55	30.082	+4	8	37.70
Mean φ (1)				37	20	25.98
1903.						
Apr. 22			33.159			18.78
23			.175			18.70
May 1			.121			18.55
4			.092			18.30
			33.137			18.58
Mean φ (4)				37	20	25.63

No. 1247.

1904.						
Apr. 11		55	46.310	+6	37	2.62
12			.265			2.95
			46.288			2.78

No. 1248.

1904.						
Apr. 13		57	27.698	+1	21	49.94
17			.700			49.99
			27.699			49.96

No. 1249.

1903.						
Apr. 22		57	29.545	+9	41	41.78
23			.548			41.30
			29.546			41.54

No. 1250.

1902.						
Mar. 27		58	35.683	+0	31	37.36
28			.759			36.67
			35.721			37.01

No. 1251.

1903.						
Apr. 24		59	18.090	+5	44	51.30
27			.013			51.36
			18.051			51.33

No. 1252.

1903.						
May 1		59	21.615	-0	45	18.69
4			.673			18.38
			21.644			18.54

No. 1253.

1904.						
Apr. 11		59	30.908	+13	11	4.28
12			.938			4.87
			30.923			4 58

No. 1254. χ Leonis.

1902.	h	m	s	°	′	″
Mar. 27	10	59	57.764	+7	51	57.15
28			.782			56.92
Apr. 3			.768			57.06
10			.741			57.53
14			.734			57.34
15			.744			57.28
			57.756			57.21
Mean φ (6)				37	20	26.43
1903.						
May 6	11	0	0.867			37.55
8			.859			38.19
12			.817			38.09
14			.832			38.23
			0.844			38.02
Mean φ (4)				37	20	26.31

No. 1255.

1902.						
May 8	0		32.850	+12	37	6.09
1903.						
Apr. 22			35.931		36	47.38
23			36.003			46.45
			35.967			46.92

No. 1256.

1903.						
Apr. 24	1		57.425	+2	28	55.78
27			.411			55.93
			57.418			55.86

No. 1257.

1904.						
Apr. 13	2		12.483	+10	43	53.76
17			.500			53.77
			12.492			53.77

No. 1258.

1902.						
Apr. 14	2		59.991	+9	33	14.97
15			.966			14.77
			59.979			14.87

No. 1259.

1902.						
Mar. 27	3		8.799	+7	6	16.54
28			.798			16 50
			8.799			16.52

No. 1260.

1903.						
May 1	3		13.730	+4	3	30.86
4			.743			30.44
			13.736			30.65

No. 1261.

1903.	h	m	s	°	′	″
May 12	11	3	19.666	−1	22	39.80
14			.724			39.75
			19.695			39.77

No. 1262.

1902.						
May 8		3	34.621	−0	1	55.47
1903.						
Apr. 22			37.671		2	14.89
23			.736			14.84
			37.703			14.86

No. 1263.

1902.						
Apr. 3		3	42.241	+5	31	22.29
10			.194			22.85
			42.218			22.57

No. 1264.

1903.						
May 6		4	1.601	+2	7	19.64
8			.699			19.56
			1.650			19.60

No. 1265.

1904.						
Apr. 11		4	19.626	−0	48	46.32
12			.591			46.30
			19.609			46.31

No. 1266.

1903.						
Apr. 24		5	32.880	+11	49	41.02
27			.884			41.54
			32.882			41.28

No. 1267.

1902.						
Mar. 27		7	36.814	+10	23	54 37
28			.861			54.19
			36.837			54.28

No. 1268. p₅ Leonis

1903.						
May 1		8	47.621	+0	27	30.54
4			.657			30.11
			47.639			30 32
Mean φ (2)				37	20	26.06
1904.						
Apr. 11			50.729			10.40
12			.752			10.41
			50.740			10.41
Mean φ (2)				37	20	26.12

No. 1269.

1902.	h	m	s	°	′	″
Apr. 14	11	8	51.235	+2	48	11.85
15			.233			11.47
			51.234			11.66

No. 1270.

1903.						
Apr. 24		8	59.471	+8	35	30.02
27			.517			30.42
			59.494			30.22

θ Leonis.

1902.						
Mar. 27		9	5.905	+15	57	55.43
28			.893			55.03
Apr. 3			.905			54.96
10			.891			54.66
			5.898			55.02
Mean φ (4)				37	20	25.93

No. 1271.

1903.						
May 6		9	18.527	+4	49	30.52
8			.501			30.35
			18.514			30.43

No. 1272.

1904.						
Apr. 13		9	24.730	+1	24	34.72
17			.761			34.93
			24.746			34.83

No. 1273.

1902.						
May 8		9	28 715	+6	31	35.93
1903.						
Apr. 22			31.743			16.64
23			.799			16.32
			31.771			16.48

No. 1274.

1903.						
May 12		9	39.790	−0	44	29.84
14			.905			29.90
			39.848			29.87

No. 1275.

1902.						
Apr. 14		10	50.674	+13	22	50.82
15			.679			50.92
			50.676			50.87

No. 1276.

1902.						
Apr. 3		12	14.840	+2	32	58.06
10			.877			58.82
			14.858			58.44

No. 1277.

1903.	h	m	s	°	′	″
May 1	11	13	17.495	+12	30	57.10
4			.479			56.39
			17.487			56.75

No. 1278.

1903.						
May 6		13	56.288	+2	10	56.66
8			.296			56.74
			56.292			56.70

No. 1279.

1901.						
Apr. 14		14	1.472	+10	17	13.08
15			.433			13.27
			1.453			13.17

No. 1280.

1902.						
May 8		14	23.478	−1	6	53.07
1903.						
Apr. 22			26.622		7	12.56
23			.641			12.44
			26.631			12.50

No. 1281.

1903.						
Apr. 24		14	34.406	+0	20	47.42
27			.364			48.16
			34.385			47.79

No. 1282.

1903.						
May 12		14	44.777	+4	9	8.64
14			.836			9.20
			44.806			8.92

No. 1283.

1902.						
Apr. 3		15	54.102	+2	57	36.70
10			.170			37.23
			54.136			36.96

No. 1284.

1904.						
Apr. 11		16	2.240	+5	24	25.22
12			.157			25.97
			2.199			25.60

No. 1285. σ Leonis.

1903.						
May 6		16	8.151	+6	33	40.15
8			.099			39.34
			8.125			39.75
Mean φ (2)				37	20	26.30
1904.						
Apr. 13			11.190			19.73
17			.222			19.90
			11.206			19.82
Mean φ (2)				37	20	26.44

No. 1286.

1903.	h	m	s	°	′	″
May 1	11	16	39.023	+7	45	17.95
4			.074			17.81
			39.048			17.88

No. 1287.

1902.						
May 8		16	45.797	+9	42	21.97
1903.						
Apr. 22			48.926			1.94
23			.953			1.89
			48.940			1.91

No. 1288.

1902.						
Apr. 14		18	11.384	+7	7	26.49
15			.364			26.33
			11.374			26.41

No. 1289.

1903.						
Apr. 24		18	19.990	+0	39	51.81
27			.927			52.39
			19.959			52.10

No. 1290.

1904.						
Apr. 11		18	40.557	−2	45	37.96
12			.581			37.72
			40.569			37.84

No. 1291. ι Leonis.

1903.						
May 12		18	52.127	+11	3	48.70
14			.024			48.93
			52.076			48.81
Mean φ (2)				37	20	26.41

No. 1292.

1902.						
Apr. 3		19	0.588	+1	56	44.79
10			.575			44.89
			0.581			44.84

No. 1293.

1903.						
May 6		19	20.903	−0	59	31.95
8			.895			31.43
			20.899			31.69

No. 1294.

1903.						
May 1		19	57.123	+11	57	47.98
4			.180			48.70
			57.151			48.34

No. 1295.

1902.	h	m	s	°	′	″
May 8	11	20	8.097	+6	16	41.53
1903.						
Apr. 22			11.132			21.79
23			.159			22.34
			11.145			22.06

No. 1296.

1904.						
Apr. 13		20	54.056	+4	23	19.50
17			.081			(18.26)
24			.012			19.52
			54.050			19.51

No. 1297.

1902.						
Apr. 14		21	13.642	+9	11	56.56
15			.651			56.38
			13.647			56.47

No. 1298.

1903.						
Apr. 24		21	50.781	+3	32	30.82
27			.760			31.20
			50.770			31.01

No. 1299.

1903.						
May 6		22	35.468	+1	29	33.42
8			.434			33.75
			35.451			33.59

No. 1300.

1903.						
May 1		22	56.350	−1	9	57.36
4			.269			57.83
			56.310			57.60

No 1301. τ Leonis.

1904.						
Apr. 11		23	0.072	+3	23	6.90
12			.006			6.28
			0.039			6.59
Mean φ (2)				37	20	25.47

No. 1302.

1902.						
May 8		23	55.775	+10	34	36.29
1903.						
Apr. 22			58.849			16.37
23			.867			16.41
			58.858			16.39

No. 1303.

1902.						
Apr. 14		24	14.520	−3	54	33.46
15			.555			33.84
			14.537			33.65

No. 1304.

1903.	h	m	s		°	′	″
May 12	11	24	21.803	+	0	11	31.14
14			.834				31.21
			21.818				31.17
1904.			**No. 1305.**				
Apr. 13		24	39.862	+	4	18	31.67
17			.910				31.24
			39.886				31.46
1903.			**No. 1306.**				
Apr. 24		24	39.373	+	8	8	4.39
27			.450				4.26
			39.411				4.33
1904.			**No. 1307.**				
Apr. 11		25	24.608	−	2	28	26.09
12			.611				26.08
			24.610				26.08
1902.			**No. 1308.**				
May 8		26	59.500	−	1	14	30.75
1903.							
Apr. 22		27	2.618				49.78
23			.606				50.25
			2.612				50.01
1903.			**No. 1309.**				
May 12		27	57.121	+	9	55	5.05
14			.106				5.56
			57.113				5.30
1903.			**No. 1310.**				
Apr. 24		28	7.461	+	7	56	48.51
27			.489				48.89
			7.475				48.70
1903.			**No. 1311.**				
May 1		28	25.570	+	4	40	12.33
4			.546				12.17
			25.558				12.25
1903.			**No. 1312.**				
May 6		28	25.219	+	1	20	21.97
8			.217				21.57
			25.218				21.77
1902.			**No. 1313.**				
Apr. 14		28	34.233	+	3	2	27.05
15			.227				27.57
			34.230				27.31

No. 1314.

1904.	h	m	s		°	′	″
Apr. 11	11	29	11.467	+	11	33	17.03
12			.494				17.33
			11.480				17.18
1904.			**No. 1315.**				
Apr. 13		29	27.186	+	3	35	37.01
17			.171				35.38
			27.178				36.20
1902.			**No. 1316.**				
May 8		29	59.127	−	3	49	5.50
1903.							
Apr. 22		30	2.202				25.97
23			.203				25.67
			2.202				25.82
1902.			**No. 1317.**				
Apr. 14		30	30.391	+	7	3	53.79
15			.387				53.74
			30.389				53.76
1903.			**No. 1318.**				
Apr. 24		31	35.145	+	6	38	46.02
27			.131				46.15
			35.138				46.09
1903.			**No. 1319.** *υ* **Leonis.**				
May 1		31	58.954	−	0	17	17.72
4			.949				17.24
			58.952				17.48
Mean φ (2)					37	20	26.41
1904.							
Apr. 13		32	2.055				36.59
17			.032				37.76
			2.043				37.17
Mean φ (2)					37	20	26.13
1903.			**No. 1320.**				
May 6		32	10.236	+	5	30	0.08
8			.233				0.17
			10.234				0.13
1903.			**No. 1321.**				
May 12		33	26.712	−	1	53	57.06
14			.753				56.78
			26.733				56.92
1904.			**No. 1322.**				
Apr. 11		33	30.579	+	8	39	56.56
12			.608				56.76
			30.593				56.66

No. 1323.

1902.	h	m	s		°	′	″
Apr. 14	11	33	30.003	+	7	2	35.34
15			.021				35.20
			30.012				35.27
1903.			**No. 1324.**				
Apr. 22		35	20.146	−	2	46	52.80
23			.141				52.43
			20.143				52.62
1903.			**No. 1325.**				
Apr. 24		35	25.724	+	1	29	23.63
27			.741				23.40
			25.732				23.51
1903.			**No. 1326.**				
May 1		35	29.978	+	5	40	39.56
4			.887				39.76
			29.933				39.66
1903.			**No. 1327.**				
May 6		35	30.948	+	4	11	38.62
8			.881				38.83
			30.915				38.72
1903.			**No. 1328.**				
May 12		35	54.526	−	4	39	37.37
14			.614				37.10
			54.570				37.23
1902.			**No. 1329.**				
Apr. 14		37	24.163	+	2	54	24.06
15			.233				24.27
			24.198				24.17
1902.			**No. 1330.**				
May 8		38	18.873	+	0	43	47.29
1903.							
Apr. 22			21.890				27.28
23			.886				26.72
			21.888				27.00
1903.			**No. 1331.**				
Apr. 24		38	57.892	−	6	8	16.32
27			.838				15.63
			57.865				15.97
1903.			**No. 1332.**				
May 12		39	38.105	−	0	50	47.31
14			.142				47.12
			38.124				47.22

No. 1333.

1904.	h	m	s		°	′	″
Apr. 13	11	40	11.892	+	1	26	34.13
17			.880				33.09
			11.886				33.61

No. 1334.

1904.	h	m	s		°	′	″
Apr. 11		40	20.221	+	8	47	30.39
12			.140				30.20
			20.180				30.30

No. 1335. ν Virg.

1903.	h	m	s		°	′	″
May 6		40	52.428	+	7	4	23.03
8			.440				23.22
			52.434				23.12
Mean φ (2)					37	20	25.81

No. 1336.

1902.	h	m	s		°	′	″
Apr. 14		41	19.240	−	2	27	28.81
15			.320				28.86
			19.280				28.83

No. 1337.

1902.	h	m	s		°	′	″
May 8		41	21.146	−	4	48	16.66
1903.							
Apr. 22			24.248				37.01
23			.234				37.00
			24.241				37.00

No. 1338.

1903.	h	m	s		°	′	″
May 1		41	42.994	−	3	12	8.76
4			43.004				9.33
			42.999				9 05

No. 1339.

1904.	h	m	s		°	′	″
Apr. 13		41	51.330	+	4	0	29.55
17			.373				28.89
			51.352				29.22

No. 1340.

1903.	h	m	s		°	′	″
Apr. 24		42	55.873	+	8	47	5.46
27			.975				4.93
			55.924				5.19

No. 1341.

1903.	h	m	s		°	′	″
May 6		44	4.497	+	0	13	13.51
8			.524				13.71
			4.510				13.61

No. 1342.

1903.	h	m	s		°	′	″
May 12	11	44	8.761	+	5	43	36.06
14			.779				36.55
			8.770				36.30

No. 1343.

1904.	h	m	s		°	′	″
Apr. 11		44	16.786	−	6	49	37.26
12			.787				37.85
			16.786				37.56

No. 1344.

1903.	h	m	s		°	′	″
May 1		45	28.738	−	1	52	43.18
4			.692				43.04
			28.715				43.11

No. 1345. β Virg.

1902.	h	m	s		°	′	″
Apr. 14		45	35.426	+	2	19	1.61
15			.451				1.08
May 8			.544				1.53
22			.413				0.84
			35.458				1.27
Mean φ (4)					37	20	26.22
1903.							
Apr. 22			38.669			18	40.81
23			.656				40.39
24			.512				41.34
27			.626				41.11
			38.616				40.91
Mean φ (4)					37	20	26.18

No. 1346.

1904.	h	m	s		°	′	″
Apr. 13		46	7.804	−	4	47	57.73
17			.801				58.31
			7.802				58.02

No. 1347.

1903.	h	m	s		°	′	″
May 12		46	35.217	+	7	24	57.08
14			.216				57.92
			35.217				57.50

No. 1348.

1903.	h	m	s		°	′	″
May 6		48	1.234	−	5	41	52.78
8			.134				52.73
			1.184				52.76

No. 1349.

1902.	h	m	s		°	′	″
Apr. 14		48	49.299	+	1	5	51.04
15			.331				50.45
			49.315				50.74

No. 1350.

1902.	h	m	s		°	′	″
May 8	11	48	51.290	−	3	13	49.19
22			.279				48.95
			51.284				49.07

No. 1351.

1903.	h	m	s		°	′	″
Apr. 24		49	4.290	−	0	29	59.03
27			.279				58.69
			4.284				58.86

No. 1352.

1903.	h	m	s		°	′	″
May 1		49	6.061	+	5	25	6.33
4			.082				6.52
			6.071				6.43

No. 1353.

1903.	h	m	s		°	′	″
May 12		49	56.611	−	1	50	4.75
14			.730				4.94
			56.670				4.84

No. 1354.

1904.	h	m	s		°	′	″
Apr. 11		50	12.253	+	3	45	11.14
12			.170				10.90
			12.212				11.02

No. 1355.

1904.	h	m	s		°	′	″
Apr. 13		50	33.202	+	6	21	15.47
17			.176				13.86
			33.189				14.66

No. 1356.

1902.	h	m	s		°	′	″
Apr. 14		51	46.922	+	5	53	27.64
15			.934				27.73
			46.928				27.68

No. 1357.

1902.	h	m	s		°	′	″
May 8		52	0.393	−	4	14	14.88
22			.367				14.80
			0.380				14.84

No. 1358.

1903.	h	m	s		°	′	″
May 1		54	3.282	−	6	6	51.84
4			.281				51.79
			3.281				51.82

No. 1359.

1903.	h	m	s		°	′	″
May 6		54	16.541	−	2	46	55.58
8			.538				55.77
			16.540				55.68

No. 1360.

1904.	h m s	° ′ ″
Apr. 11	11 54 29.054	+ 2 21 44.05
12	.013	44.24
	29.034	44.15

No. 1361. b Virg.

1902.		
Apr. 14	54 55.704	+ 4 12 4.48
15	.765	4.19
May 8	.768	3.58
22	.721	4.53
23	.763	4.14
27	.770	3.86
	55.748	4.13
Mean φ (6)		37 20 25.98
1903.		
Apr. 24	58.813	+ 4 11 43.97
27	.809	44.09
	58.811	44.03
Mean φ (2)		37 20 26.00

No. 1362. π Virg.

1903.		
May 12	55 54.119	+ 7 9 18.26
14	.118	18.62
15	.098	18.71
25	.099	18.77
	54.108	18.59
Mean φ (4)		37 20 26.42

No. 1363.

1903.		
May 1	56 3.761	− 1 13 34.28
4	.770	34.13
	3.765	34.20

No. 1364.

1903.		
May 8	56 28.425	− 3 39 29.25
11	.374	29.97
	28.400	29.61

No. 1365.

1904.		
Apr. 12	57 2.281	+ 0 38 13.92
13	.289	14.77
	2.285	14.34

Anon.

1904.		
Apr. 17	57 2.216	+ 0 36 59.05

No. 1366.

1902.		
Apr. 14	57 50.630	− 7 8 17.70
15	.660	17.65
	50.645	17.67

No. 1367.

1902.	h m s	° ′ ″
May 8	11 58 44.292	+ 6 6 20.99
22	.308	20.58
	44.300	20 79

No. 1368.

1903.		
Apr. 24	59 15.549	+ 2 0 10.50
27	.622	10.48
	15.585	10.49

No. 1369.

1903.		
May 1	59 45.078	+ 4 6 50.33
4	.181	49 99
	45.130	50.16

No. 1370.

1903.		
May 8	12 0 17.721	− 0 58 13.66
11	.706	13.58
	17.713	13.62

No. 1371.

1902.		
May 23	0 33.863	− 5 18 1.65
27	.935	1.07
	33.899	1.36

No. 1372.

1902.		
Apr. 14	0 58.674	− 2 35 7.44
15	.730	7.53
	58.702	7.48

No. 1373.

1902.		
May 8	2 59.494	+ 1 10 3.10
22	.422	3.05
	59.458	3.07

No. 1374.

1903.		
Apr. 24	3 14.189	− 3 44 49.70
27	.208	49.43
	14.198	49.56

No. 1375.

1902.		
May 23	3 33.793	− 6 18 30.42
27	.784	30.38
	33.788	30.40

No. 1376. 10 Virg.

1903.	h m s	° ′ ″
May 6	12 4 43.080	+ 2 26 33.57
8	.045	33.46
11	.071	33.18
15	.054	33.51
25	.064	33.45
27	.079	33.77
28	.070	32.79
	43.066	33.39
Mean φ (7)		37 20 26.48
1904.		
Apr. 11	46.192	12.73
12	.192	12.78
13	.204	13.96
17	.189	12.37
	46.194	12.96
Mean φ (4)		37 20 26.36

No. 1377.

1902.		
Apr. 14	4 47.564	− 0 27 32.04
15	.640	32.36
	47.602	32.20

No. 1378.

1903.		
May 1	5 6.818	+ 6 20 47.12
4	.796	46.94
	6.807	47.03

No. 1379.

1903.		
May 12	5 28.504	− 7 14 5.24
14	.613	5.40
	28.559	5.32

No. 1380.

1902.		
May 8	6 20.552	− 2 9 6.48
22	.541	6.51
	20.546	6.50

No. 1381.

1902.		
May 23	6 39.481	+ 4 36 3.59
27	.476	3.56
	39.478	3.57

No. 1382.

1903.		
May 15	7 15.668	− 3 51 43.14
25	.694	43.27
	15.681	43.20

No. 1383.

1903.	h	m	s		°	′	″
May 1	12	8	7.419	+	0	46	46.07
4			.438				45.81
			7.428				45.94

No. 1384.

1902.							
Apr. 14		8	55.429	+	2	48	21.61
15			.564				21.41
			55.496				21.51

No. 1385. M. 518.

1903.							
Apr. 24		9	17.257	−	5	10	49.06
27			[.395]				49.09
			17.257				49.07
Mean φ (2)					37	20	26.46
1904.							
Apr. 11			20.359			11	9.20
12			.368				9.41
			20.363				9.30
Mean φ (2)					37	20	26.56

No. 1386.

1902.							
May 8		9	58.987	−	0	46	53.68
22			.944				53.53
			58.965				53.60

Anon.

1903.							
May 27		10	8.689	−	6	42	58.69
28			.694				58.66
			8.691				58.67

No. 1387.

1903.							
May 12		10	9.215	−	6	43	0.08
14			.201			42	59.73
			9.208			42	59.90

No. 1388.

1903.							
May 8		10	17.190	+	5	3	50.47
11			.206				50.81
			17.198				50.64

No. 1389.

1902.							
May 23		11	19.569	−	6	59	13.87
27			.549				14.27
			19.559				14.07

No. 1390.

1903.							
May 1		11	45.733	−	2	12	0.65
4			.684				0.48
			45.709				0.56

No. 1391.

1903.	h	m	s		°	′	″
May 15	12	12	0.492	+	0	53	28.62
25			.468				29.10
			0.480				28.86

No. 1392.

1903.							
May 8		12	59.875	+	2	6	51.92
11			.856				51.67
			59.865				51.80

Anon.

1903.							
May 27		13	10.551	−	3	24	56.78
28			.553				56.66
			10.552				56.72

No. 1393.

1903.							
May 12		13	10.954	−	3	24	38.48
14			.939				37.56
			10.946				38.02

Anon.

1903.							
May 15		13	32.846	−	8	21	48.93

No. 1394.

1903.							
Apr. 24		13	41.918	−	0	14	53.04
27			.917				52.24
			41.917				52.64

No. 1395.

1903.							
May 25		14	20.597	−	8	22	32.31
27			.613				31.27
28			.597				32.05
			20.602				31.88

No. 1396. η Virg.

1904.							
Apr. 14		14	53.574	−	0	7	20.55
15			.543				19.71
May 8			.496				20.07
22			.506				19.86
23			.517				19.91
27			.524				20.02
			53.527				20.02
Mean φ (6)					37	20	26.29

No. 1397.

1903.							
Apr. 24		15	25.012	−	6	1	7.03
27			24.991				6.06
			25.001				6.55

No. 1398. c Virg.

1903.	h	m	s		°	′	″
May 1	12	15	25.423	+	3	51	10.24
4			.407				9.78
12			.410				10.57
14			.371				10.07
			25.403				10.16
Mean φ (4)					37	20	26.00

No. 1399.

1902.							
Apr. 14		16	36.814	+	0	23	10.85
15			.822				10.47
			36.818				10.66

No. 1400.

1902.							
May 8		17	19.788	−	2	13	56.22
22			.796				56.38
			19.792				56.30

No. 1401.

1902.							
May 23		18	7.095	−	6	45	20.71
27			.060				20.35
			7.077				20.53

No. 1402.

1903.							
May 1		18	16.154	−	4	26	9.54
4			.098				9.04
			16.126				9.29

No. 1403.

1903.							
Apr. 24		18	32.249	+	1	15	17.77
27			.302				18.19
			32 276				17.98

No. 1404.

1902.							
Apr. 14		19	39.998	+	1	55	35.46
15			40.068				36.28
			40.033				35.87

No. 1405.

1903.							
May 8		20	19.991	−	0	31	57.33
11			20.005				57.23
			19.998				57.28

No. 1406.

1903.							
May 12		21	3.481	+	2	34	44.97
14			.525				45.23
			3.503				45.10

	h	m	s	°	′	″
			No. 1407.			
1903.						
May 15	12	21	28.843	− 5	30	12.49
25			.763			12.07
			28.803			12.28
1902.			**No. 1408.**			
May 8		21	44.930	+ 0	21	33.45
22			45.027			33.72
			44.979			33.58
1902.			**No. 1409.**			
May 23		21	57.973	− 2	59	23.11
27			.989			22.69
			57.981			22.90
1903.			**No. 1410. M. 525.**			
May 15		22	52.981	− 4	4	42.62
25			.879			43 14
27			.895			42.44
28			.848			42.43
			52.901			42.66
Mean φ (4)				37	20	26.07
1902.			**No. 1411.**			
Apr. 14		22	53.679	− 8	8	4.71
15			.735			4.90
			53.707			4.80
1903.			**No. 1412.**			
May 1		23	21.812	+ 4	56	1.51
4			.801			1.71
			21.807			1.61
1903.			**No. 1413.**			
May 8		24	11.156	− 1	53	34.45
11			.098			34.45
			11.127			34.45
1902.			**No. 1414.**			
May 8		24	21.503	− 0	41	27.34
22			.506			27.54
			21.504			27.44
1903.			**No. 1415.**			
May 12		25	2.933	− 5	29	7.35
14			.984			7.16
			2.959			7.26

	h	m	s	°	′	″
			No. 1416.			
1903.						
Apr. 24	12	25	5.723	− 6	27	16.92
27			.728			16.39
			5.725			16.65
1902.			**No. 1417.**			
May 23		25	34.496	+ 4	3	0.50
27			.558			0.64
			34.527			0.57
1902.			**No. 1418.**			
Apr. 14		26	14.163	+ 1	52	7.54
15			.104			7.80
			14.134			7.67
1903.			**No. 1419.**			
May 1		26	20.199	+ 2	50	18.57
4			.090			17.75
			20.144			18.16
1903.			**No. 1420.**			
Apr. 24		26	39.446	− 4	31	3.85
27			.448			3.07
			39.447			3.46
1902.			**No. 1421.**			
May 8		27	58.255	+ 0	15	56.86
22			.267			57.28
			58.261			57 07
1903.			**No. 1422.**			
May 15		28	46.278	− 8	55	0.83
25			.238			0.89
			46.258			0.86
1903.			**No. 1423.**			
May 8		29	14.028	− 3	11	4.34
11			13.955			4.76
			13.991			4.55
1902.			**No. 1424.**			
Apr. 14		29	21.890	− 0	52	3.28
15			.851			2.90
			21.870			3.09
1903.			**No. 1425.**			
May 1		30	44.713	− 6	54	46.60
27			.676			45.87
28			.729			46.67
			44.706			46.38

	h	m	s	°	′	″
			No. 1426.			
1902.						
May 8	12	30	49.699	+ 1	8	55.11
22			.631			55.17
			49.665			55.14
1903.			**No. 1427. f Virg.**			
May 12		31	47.523	− 5	17	50.65
14			.554			50.14
15			.492			50.14
25			.542			50.33
			47.528			50.32
Mean φ (4)				37	20	26.27
1902.			**No. 1428.**			
May 23		32	3.927	− 1	46	43.24
27			.960			42.56
			3.943			42.90
1902.			**No. 1429.**			
Apr. 14		33	4.678	+ 3	49	18.71
15			.737			19.04
			4.707			18.87
1903.			**No. 1430.**			
Apr. 24		33	18.047	− 10	59	1.48
27			.069			1.30
			18.058			1.39
1903.			**No. 1431.**			
May 15		33	25.526	+ 2	23	19.62
25			.535			18.98
			25.530			19.30
1903.			**No. 1432.**			
May 1		33	44.122	− 3	50	24.42
4			.003			24.19
			44.062			24.30
1902.			**l.**			
May 8		33	55.473	− 0	18	55.38
22			.467			55.51
			55.470			55.45
1903.			**No. 1433.**			
May 8		34	14.380	− 7	27	42.21
11			.299			42.19
			14.340			42.20
1903.			**No. 1434.**			
May 12		34	26.738	+ 0	14	12.47
14			.727			13.40
			26.732			12.93

No. 1435.

1902.	h	m	s		°	′	″
May 23	12	34	27.368	−	5	33	42.24
27			.299				42.75
			27.333				42.50

No. 1436.

1903.							
Apr. 24		34	54.724	−	2	31	59.71
27			.801				59.17
			54.763				59.44

No. 1437.

1903.							
May 8		36	7.894	−	9	17	24.80
11			.869				24.71
			7.881				24.76

No. 1438.

1902.							
Apr. 14		37	2.885	+	1	1	59.63
15			.881				59.65
			2.883				59.64

n.

1902.							
May 8		37	55.495	−	1	42	54.99
22			.430				54.88
			55.463				54.93

No. 1439.

1903.							
May 1		38	1.208	−	3	30	46.49
4			.129				46.74
			1.168				46.61

No. 1440.

1902.							
Apr. 14		39	9.406	−	2	18	20.13
15			.420				20.04
			9.413				20.08

No. 1441.

1903.							
Apr. 24		40	1.766	−	10	28	7.88
27			.694				7.96
			1.730				7.92

No. 1442.

1903.							
May 8		40	36.307	+	1	31	3.07
11			.245				3.14
			36.276				3.10

No. 1443.

1902.							
May 8		41	15.112	+	3	0	1.80
22			.118				1.63
			15.115				1.71

No. 1444.

1903.	h	m	s		°	′	″
May 1	12	41	58.125	−	7	16	7.02
4			.006				7.03
			58.066				7.02

No. 1445.

1902.							
May 23		42	1.276	−	8	40	42.82
27			.274				43.05
			1.275				42.94

No. 1446.

1903.							
May 12		42	32.581	−	5	46	15.49
14			.587				15.53
			32.584				15.51

No. 1447.

1903.							
May 15		42	34.255	−	4	9	2.66
25			.266				3.72
			34.260				3.19

No. 1448.

1903.							
May 8		42	39.729	−	12	2	55.96
11			.790				55.89
			39.760				55.93

No. 1449. 35 Virg.

1903.							
Apr. 24		42	55.077	+	4	6	8.19
27			.033				8.40
			55.055				8.29
Mean φ (2)					37	20	26.37

No. 1450.

1902.							
Apr. 14		43	5.808	+	0	10	32.73
15			.741				33.39
			5.774				33.06

No. 1451.

1903.							
May 12		44	10.743	−	3	10	13.43
14			.741				13.42
			10.742				13.42

No. 1452.

1902.							
May 23		45	1.993	+	1	12	1.50
27			.997				1.83
			1.995				1.66

No. 1453.

1903.							
May 1		45	5.202	−	7	6	15.13
4			.190				14.80
			5.196				14.97

No. 1454.

1902.	h	m	s		°	′	″
May 8	12	45	22.211	−	1	17	28.61
22			.158				28.67
			22.184				28.64

No. 1455.

1902.							
Apr. 14		46	16.971	−	9	48	17.14
15			.916				17.19
			16.943				17.16

No. 1456.

1903.							
Apr. 24		46	40.717	+	3	35	2.10
27			.635				2.68
			40.676				2.39

No. 1457.

1903.							
May 8		47	11.774	−	5	33	42.05
11			.741				42.34
			11.757				42.20

No. 1458.

1903.							
May 15		47	13.727	−	0	24	5.05
25			.778				4.95
			13.753				5.00

No. 1459.

1903.							
May 1		48	13.171	−	3	1	34.26
4			.079				34.48
			13.125				34.37

No. 1460.

1903.							
May 12		48	49.471	+	2	18	41.24
14			.468				40.84
			49 470				41.04

No. 1461.

1903.							
May 15		49	15.611	−	11	7	19.95
25			.626				20.08
			15.618				20.01

No. 1462. ψ Virg.

1902.							
May 30		49	15.311	−	9	0	24.43
June 2			.325				24.13
3			.331				23.84
4			.274				24.65
			15.310				24 26
Mean φ (4)					37	20	26.10
1903.							
May 8			18.446				43.66
11			.391				43.79
			18.418				43.72
Mean φ (2)					37	20	26.22

	h	m	s	°	′	″
			No. 1463.			
1903.	h	m	s	°	′	″
Apr. 24	12	50	40.753	+ 0	34	51.56
27			.663			51.87
			40.708			51.72
1902.			**δ Virg.**			
Apr. 14		50	40.016	+ 3	55	48.38
15			39.978			48.49
May 8			40.017			47.93
22			40.020			48.52
23			39.987			48.24
27			39.980			48.29
			40.000			48.31
Mean φ (6)				37	20	25.78
1903.			**No. 1464.**			
May 1		51	14.857	− 4	20	19.56
4			.857			19.90
			14.857			19.73
1903.			**No. 1465.**			
May 12		51	54.237	− 10	21	26.75
14			.283			26.70
			54.260			26.72
1902.			**No. 1466.**			
May 15		52	16.053	− 8	23	9.73
25			.173			9.88
			16.113			9.80
1902.			**No. 1467.**			
May 23		52	28.105	− 12	16	51.95
27			.040			51.53
			28.072			51.74
1903.			**No. 1468.**			
May 8		52	36.066	− 2	14	7.96
11			.088			8.49
			36.077			8.22
1903.			**No. 1469.**			
Apr. 24		53	34.354	− 6	25	28.80
27			.369			28.02
			34.361			28.41
1902.			**No. 1470.**			
Apr. 14		53	55.951	− 5	33	40.90
15			.920			40.45
			55.935			40.67

	h	m	s	°	′	″
			No. 1471.			
1902.	h	m	s	°	′	″
May 8	12	54	36.646	− 3	17	0.10
22			.568		16	59.98
			36.607		17	0.04
1903.			**No. 1472.**			
May 1		55	9.022	− 0	39	47.78
4			8.972			47.94
			8.997			47.86
1903.			**No. 1473.**			
May 15		55	26.645	− 8	34	35.21
25			.622			34.92
			26.633			35.07
1903.			**No. 1474.**			
May 8		56	19.349	− 10	38	1.02
11			.349			0.95
			19.349			0.98
1903.			**No. 1475.**			
Apr. 24		56	33.345	+ 2	2	33.51
27			.407			33.97
			33.376			33.74
1903.			**No. 1476.**			
May 12		57	8.345	− 11	35	16.07
14			.412			15.73
			8.378			15.90
1903.			**No. 1477.**			
May 1		58	17.733	− 2	26	34.25
4			.703			34.21
			17.718			34.23
1903.			**No. 1478.**			
May 12		58	49.868	− 4	38	5.79
14			.817			5.87
			49.842			5.83
1902.			**48 Virg.**			
Apr. 14		58	51.436	− 3	8	9.94
15			.449			9.73
May 8			.424			9.74
22			.434			9.45
23			.371			9.73
27			.382			9.24
			51.416			9.64
Mean φ (6)				37	20	26.69

	h	m	s	°	′	″
			No. 1479.			
1903.	h	m	s	°	′	″
May 8	12	59	10.802	− 6	8	28.71
11			.785			28.74
			10.794			28.73
1903.			**No. 1480.**			
Apr. 24		59	47.292	+ 0	49	5.85
27			.331			6.19
			47.312			6.02
1902.			**No. 1481.**			
May 23	13	0	25.616	− 12	15	48.63
27			.665			48.12
			25.640			48.37
1902.			**No. 1482.**			
June 6		0	34.207	− 9	58	34.98
9			.214			35.06
			34.210			35.02
1902.			**No. 1483.**			
June 3		0	41.904	− 13	35	10.76
4			.891			10.58
			41.897			10.67
1902.			**No. 1484.**			
May 30		0	44.501	− 7	8	3.29
June 2			.500			2.18
			44.500			2.74
1902.			**No. 1485.**			
May 8		1	10.427	− 3	47	2.36
22			.385			1.92
			10.406			2.14
1902.			**No. 1486.**			
Apr. 14		1	51.810	− 1	22	50.27
15			.800			50.56
			51.805			50.42
1902.			**No. 1487.**			
June 3		2	45.678	− 10	12	59.76
4			.658			59.77
			45.668			59.76
1903.			**No. 1488.**			
May 1		3	22.510	− 11	14	33.55
4			.502			34.11
			22.506			33.83

No. 1489.

1903.	h	m	s	°	′	″
May 15	13	3	28.902	- 8	27	53.59
25			.877			53.23
			28.890			53.41

No. 1490.

1902.						
May 30		4	37.369	- 9	48	23.95
June 2			.430			23.72
			37.400			23.84

No. 1492.

1903.						
May 12		4	42.996	- 2	52	13.96
14			.983			13.45
			42.990			13.70

No. 1491.

1903.						
May 8		4	43.601	- 7	8	16.30
11			.565			16.02
			43.583			16.16

No. 1493. θ Virg.

1902.						
Apr. 14		4	52.501	- 5	0	56.17
15			.489			56.76
May 8			.498			56.39
22			.547			57.44
23			.497			56.97
27			.421			56.55
June 6			.499			57.02
9			.450			56.35
			52.488			56.71
Mean φ (8)				37	20	25.85
1903.						
Apr. 24			55.610		1	16.46
27			.597			16.47
May 1			.680			16.43
4			.655			16.07
15			.551			16.60
25			.623			16.18
			55.619			16.37
Mean φ (6)				37	20	26.20

No. 1494.

1903.						
May 27		5	44.938	+ 0	5	52.50
28			.942			52.18
			44.940			52.34

No. 1495.

1902.						
June 3		6	11.604	- 13	26	24.12
4			.600			24.40
			11.602			24.26

No. 1496.

1902.	h	m	s	°	′	″
June 6	13	6	52.404	- 11	52	53.50
9			.325			53.88
			52.364			53.69

No. 1497.

1903.						
May 27		7	20.224	- 5	59	4.29
28			.215			4.41
			20.220			4.35

No. 1498.

1902.						
May 30		7	43.710	- 1	14	16.01
June 2			.711			16.01
			43.710			16.01

No. 1499.

1903.						
May 8		8	39.431	- 3	51	42.13
11			.405			41.64
			39.418			41.88

No. 1500.

1903.						
May 12		9	38.902	- 9	2	31.99
14			.912			31.95
			38.907			31.97

No. 1501.

1903.						
May 15		9	51.104	- 10	50	51.58
25			.125			51.70
			51.115			51.64

No. 1502.

1902.						
May 23		10	54.489	- 2	35	30.12
27			.454			29.85
			54.471			29.99

No. 1503.

1902.						
May 30		10	58.497	- 5	8	59.35
June 2			.572			58.87
			58.535			59.11

No. 1504.

1902.						
June 3		11	43.742	- 6	25	2.19
4			.644			2.53
			43.693			2.36

No. 1505.

1902.						
June 6		11	48.024	- 12	38	28.88
9			47.990			28.85
			48.007			28.87

No. 1507.

1903.	h	m	s	°	′	″
May 15	13	12	22.274	- 10	2	6.68
25			.263			6.50
			22.268			6.59

No. 1506.

1902.						
May 23		12	19.299	- 15	1	46.51
27			.301			46.09
			19.300			46.30

No. 1508. Lal. 24660.

1903.						
May 8		12	31.889	- 0	9	52.08
11			.892			51.89
12			.859			51.93
14			.867			52.12
			31.877			52.00
Mean φ (4)				37	20	26.19

No. 1510.

1903.						
May 27		12	39.620	- 8	13	13.87
28			.610			14.06
			39.615			13.97

No. 1511.

1902.						
May 30		13	56.874	- 0	45	9.31
June 2			.977			8.58
			56.926			8.94

No. 1509.

1902.						
June 3		14	34.383	- 11	9	26.61
4			.346			26.81
			34.365			26.71

No. 1512.

1902.						
June 6		15	28.178	- 6	58	7.05
9			.155			7.03
			28.166			7.04

No. 1513.

1903.						
May 8		15	41.788	- 3	1	28.39
11			.806			27.97
			41.797			28.18

No. 1514.

1903.						
May 12		16	7.445	- 9	29	30.68
14			.413			30.64
			7.429			30.66

No. 1515.

1902.	h	m	s	°	′	″
May 23	13	16	53.914	-13	54	19.41
27			.931			19.34
			53.922			19.37

1902. **No. 1516. Mayer 553.**

May 30		16	57.277	-12	3	58.13
June 2			.324			58.66
			57.301			58.40
Mean φ (2)				37	20	25.82
1903.						
May 15		17	0.554	-12	4	17.45
25			.479			17.84
27			.468			17.74
28			.444			18.31
			0.486			17.83
Mean φ (4)				37	20	26.50

1902. **No. 1517.**

June 3		17	25.523	- 5	41	7.45
4			.506			7.39
			25.515			7.42

1902. **No. 1518.**

June 6		18	14.161	- 4	24	42.55
9			.124			42.92
			14.142			42.74

1903. **No. 1519.**

May 8		19	15.145	- 1	36	3.45
11			.148			3.50
			15.146			3.47

1903. **No. 1520.**

May 12		19	25.278	- 3	47	57.22
14			.233			57.68
			25.256			57.45

1903. **No. 1521.**

May 15		19	30.202	- 4	39	25.81
25			.305			26.20
			30.254			26.00

1902. **No. 1522. α Virg.**

May 23		20	1.757	-10	38	59.40
27			.761			59.54
			1.759			59.47
Mean φ (2)				37	20	26.23

No. 1523.

1902	h	m	s	°	′	″
May 30	13	20	6.635	- 8	16	30.99
June 2			.651			30.96
			6.643			30.98

1902. **No. 1524.**

June 3		20	13.791	- 7	4	21.32
4			.762			21.46
			13.776			21.39

1902. **No. 1525.**

June 6		21	10.245	- 0	40	57.98
9			.147			58.34
			10.196			58.16

1903. **No. 1526.**

May 27		21	35.544	-12	12	11.13
28			.605			11.00
			35.574			11.06

1903. **No. 1527.**

May 8		22	16.606	-15	28	14.23
11			.674			14.52
			16.640			14.37

1903. **No. 1528.**

May 12		23	22.504	- 9	14	29.65
14			.524			29.29
			22.514			29.47

1903. **No. 1529.**

May 15		24	48.511	-13	30	1.67
25			.507			1.69
			48.509			1.68

1902. **No. 1530.**

May 23		25	15.931	- 7	11	48.59
27			.858			48.37
			15.894			48.48

1902. **No. 1531.**

May 30		25	18.862	- 5	57	52.39
June 2			.865			52.19
			18.863			52.29

1902. **No. 1532.**

June 3		25	40.548	- 3	57	2.78
4			.523			2.75
			40.536			2.76

No. 1533.

1902.	h	m	s	°	′	″
June 6	13	25	47.865	- 2	32	42.84
9			.839			42.72
			47.852			42.78

1903. **No. 1534.**

May 8		26	55.205	- 5	45	19.16
11			.240			19.20
			55.222			19.18

1903. **No. 1535.**

May 12		26	57.234	-10	45	17.12
14			.285			16.97
			57.260			17.05

1903. **No. 1536.**

May 27		27	15.947	-12	9	50.20
28			.987			50.15
			15.967			50.18

1903. **No. 1537.**

May 15		27	40.628	-14	51	51.97
25			.575			50.85
			40.601			51.41

1902. **No. 1538.**

May 23		27	48.278	- 9	39	36.65
27			.285			36.37
			48.281			36.51

1902. **No. 1539.**

May 30		28	4.404	- 7	56	27.55
June 2			.468			26.94
			4.436			27.25

1902. **No. 1540.**

June 3		29	27.723	-12	42	41.79
24			.761			43.04
			27.742			42.41

1902. **No. 1541. 80 Virg.**

June 6		30	25.365	- 4	53	48.93
9			.319			49.29
			25.342			49.11
Mean φ (2)				37	20	26.35
1903.						
May 8			28.462	- 4	54	7.98
11			.438			7.88
12			.435			8.09
14			.456			7.80
27			.486			8.01
28			.433			7.51
			28.452			7.88
Mean φ (6)				37	20	26.46

No. 1542.

1902.	h	m	s	°	′	″
May 23	13	32	27.057	− 7	22	20.09
27			.107			19 79
			27.082			19.94

No. 1543.

1902.						
May 30		32	31.571	− 6	9	10.81
June 2			.697			10.40
			31.634			10.61

No. 1544.

1902.						
June 3		32	42 966	− 2	44	9.87
4			.951			9.89
			42.958			9.88

No. 1545.

1902.						
June 6		32	46.694	− 14	5	35.57
9			.603			35.83
			46.649			35.70

No. 1546.

1903.						
May 15		33	13.625	− 8	35	52.29
25			.597			53.02
			13.611			52.66

No. 1547.

1903.						
May 8		33	21.848	− 10	36	34.86
11			.875			34.25
			21.862			34.56

No. 1548.

1903.						
May 12		34	7.923	− 14	42	56.31
14			.881			56.28
			7.902			56.30

No. 1549.

1903.						
May 27		34	8.530	− 11	35	52.55
28			.502			52.18
			8.516			52.36

No. 1550.

1902.						
May 23		34	23.957	− 9	36	58.99
27			.969			58.04
			23.963			58.52

No. 1551.

1902.						
May 30		34	41.628	− 15	56	56.93
June 2			.652			56.55
			41.640			56.74

No. 1552.

1902.	h	m	s	°	′	″
June 6	13	35	56.442	− 5	51	27.59
9			.438			27.90
			56.440			27.74

No. 1553. m Virg.

1902.						
June 3		36	28.032	− 8	12	30.42
4			.066			29.92
			28.049			30.17
Mean φ (2)				37	20	25.58
1903.						
May 8			31.171			49.42
11			.191			49.28
			31.181			49.35
Mean φ (2)				37	20	26.74

No. 1554.

1903.						
May 12		37	16.791	− 13	4	14.27
14			.844			14.30
			16.817			14.28

No. 1555.

1903.						
May 15		38	28.565	− 3	47	6.76
25			.553			7.24
			28.559			7.00

No. 1556.

1902.						
May 30		38	48.161	− 5	0	19.02
June 2			.218			18.79
			48.190			18.90

No. 1557.

1902.						
June 6		39	3.087	− 10	56	37.49
9			.040			37.43
			3.063			37.46

No. 1558.

1903.						
May 27		39	15.628	− 15	41	28.29
28			.638			27.79
			15.633			28.04

No. 1559.

1902.						
June 3		39	29.301	− 13	43	41.01
4			.317			41.07
			29.309			41.04

No. 1560.

1903.						
May 8		39	51.732	− 7	8	50.69
11			.735			50.49
			51.733			50.59

No. 1561.

1903.	h	m	s	°	′	″
May 12	13	40	46.092	− 11	56	26.23
14			.122			25.76
			46.107			26.00

No. 1562.

1902.						
May 23		42	2.550	− 9	13	6.66
27			.572			6.33
			2.561			6.50

No. 1563.

1902.						
May 30		42	5.415	− 17	22	9.97
June 2			.454			9.97
			5.434			9.97

No. 1564.

1902.						
June 6		42	11.896	− 8	0	42.38
9			.795			42.04
			11.846			42.21

No. 1565.

1902.						
June 3		42	40.978	− 15	34	32.47
4			.932			32.81
			40.955			32.64

No. 1566.

1903.						
May 8		43	13.426	− 6	21	12.27
11			.455			11.76
			13.440			12.01

No. 1567.

1903.						
May 15		43	35.578	− 16	29	47.68
25			.546			49.24
			35.562			48.46

No. 1568.

1903.						
May 27		43	40.679	− 14	14	30.02
28			.670			29.63
			40.675			29.83

No. 1569. 89 Virg.

1903.						
May 12		44	35.947	− 17	39	4.08
14			36.014			3.96
			35.980			4.02
Mean φ (2)				37	20	26.38

No. 1570.

1902.						
May 23		45	36.104	− 10	52	21.39
27			.169			21.80
			36.137			21.60

No. 1571.

1902.	h	m	s	°	′	″
May 30	13	45	41.684	− 7	17	52.80
June 2			.724			52.38
			41.704			52.59

No. 1572.

1902.						
June 3		45	50.699	−13	11	34.67
4			.731			35.08
			50.715			34.87

No. 1573.

1902.						
June 6		47	28.751	− 4	35	10.36
9			.798			10.82
			28.774			10.59

No. 1574.

1903.						
May 11		47	44.974	−10	12	11.93
June 2			.898			11.96
3			.963			11.57
			44.945			11.82

No. 1575.

1903.						
May 12		47	49.541	− 6	0	37.23
14			.565			36.74
			49.553			36.98

No. 1576.

1903.						
May 15		47	58.090	−15	31	7.98
25			.041			8.06
			58.065			8.02

No. 1577.

1903.						
May 27		48	10.505	− 3	3	46.52
28			.447			46.11
			10.476			46.31

No. 1578.

1902.						
May 23		48	34.673	−14	10	51.01
27			.653			51.59
			34.663			51.30

No. 1579.

1902.						
May 30		49	1.661	−16	41	52.11
June 2			.691			52.17
			1.676			52.14

No. 1580.

1902.						
June 3		49	49.691	− 7	34	35.68
4			.646			35.63
			49.668			35.66

No. 1581.

1902.	h	m	s	°	′	″
June 6	13	49	56.869	−11	58	2.74
9			.794			2.90
			56.832			2.82

No. 1582.

1903.						
May 8		50	44.625	− 9	16	48.99
11			.656			48.90
			44.640			48.94

No. 1583.

1903.						
May 15		52	34.764	−10	27	2.97
25			.750			3.30
			34.757			3.14

No. 1584.

1902.						
May 23		53	9.418	−17	8	53.82
27			.455			53.91
			9.436			53.86

No. 1585. P 256.

1902.						
May 30		53	11.458	−11	34	40.10
June 2			.470			40.03
3			.492			39.05
4			.514			39.53
			11.484			39.68
Mean φ (4)				37	20	26.15
1903.						
May 27			14.701			57.71
28			.787			57.57
			14.744			57.64
Mean φ (2)				37	20	26.45

No. 1586.

1902.						
June 6		53	27.557	−15	25	37.34
9			.507			37.66
			27.532			37.50

No. 1587.

1903.						
May 8		53	44.291	−18	9	4.73
11			.280			.418
			44.285			4.45

No. 1588.

1903.						
May 12		53	54.216	− 6	27	4.47
14			.293			4.59
			54.254			4.53

No. 1589.

1903.	h	m	s	°	′	″
May 15	13	54	23.412	− 4	56	48.68
25			.502			49.97
			23.457			49.32

No. 1590.

1903.						
May 27		54	54.734	−12	59	48.10
28			.751			47.29
			54.743			47.70

No. 1591.

1902.						
May 23		54	54.697	− 7	41	5.37
27			.646			5.36
			54.672			5.37

No. 1592.

1902.						
May 30		55	10.520	−14	28	33.96
June 2			.521			33.49
			10.521			33.73

No. 1593.

1902.						
June 3		56	26.047	− 9	27	58.97
4			.025			59.56
			26.036			59.27

No. 1594.

1902.						
June 6		57	43.907	−16	53	41.09
9			.896			40.22
			43.901			40.66

No. 1595.

1903.						
May 8		57	53.612	− 6	2	36.45
11			.610			35.72
			53.611			36.09

No. 1596.

1903.						
May 12		58	16.633	−10	30	2.20
14			.623			1.54
			16.628			1.87

No. 1597.

1903.						
May 15		59	0.445	−11	39	48.98
25			.449			49.56
			0.447			49.27

No. 1598.

1902.						
May 23		59	7.527	− 4	54	37.82
27			.469			37.76
			7.498			37.79

No. 1599.

1902.	h	m	s	°	′	″
May 30	13	59	8.583	−14	30	2.93
June 2			.594			2.55
			8.589			2.74

No. 1600.

1903.						
May 27		59	13.184	− 8	47	30.95
28			.208			30.37
			13.196			30.66

No. 1601.

1902.						
June 3		59	53.561	−15	51	59.52
4			.476			59.50
			53.519			59.51

No. 1602.

1903.						
May 12	14	0	6.582	− 6	48	41.58
14			.597			41.12
			6.590			41.35

No. 1603. 94 Virg.

1901.						
June 3		1	3.139	− 8	25	9.96
4			.131			10.09
			3.135			10.03
Mean φ (2)				37	20	26.68
1902.						
June 13			6.328			26.91
16			.322			26.54
			6.325			26.72
Mean φ (2)				37	20	26.42
1903.						
May 8			9.521			44.13
11			.527			43.72
15			.529			43.85
25			.582			43.86
27			.500			44.17
28			.547			43.27
			9.534			43.83
Mean φ (6)				37	20	26.21

No. 1604.

1901.						
June 6		1	20.429	−13	43	55.86
7			.420			55.57
			20.424			55.72

No. 1605.

1901.						
June 10		1	28.600	− 8	50	28.16
12			.527			28.65
			28.563			28.41

No. 1606.

1901.	h	m	s	°	′	″
June 13	14	1	54.461	− 7	58	3.97
17			.412			2.83
			54.436			3.40

No. 1607.

1902.						
May 23		2	46.727	−12	27	34.15
27			.780			34.11
			46.754			34.13

No. 1608.

1902.						
May 30		3	13.850	−11	21	49.99
June 2			.838			49.71
			13.844			49.85

No. 1609.

1902.						
June 3		3	27.925	−17	16	15.75
4			.892			15.84
			27.908			15.80

No. 1610.

1902.						
June 6		3	35.571	−18	46	45.02
9			.494			44.56
			35.533			44.79

No. 1611.

1902.						
June 13		3	47.193	− 9	52	14.17
16			.233			13.00
			47.213			13.59

No. 1612.

1901.						
June 3		5	25.915	−15	50	4.26
4			.972			4.02
			25.943			4.14

No. 1613.

1901.						
June 6		5	46.044	− 5	30	24.43
7			.072			25.29
			46.058			24.86

No. 1614.

1901.						
June 10		5	50.564	−14	44	37.05
12			.513			36.91
			50.539			36.98

No. 1615. κ Virg.

1901.						
June 13		7	36.789	− 9	48	46.41
17			.799			46.36
			36.794			46.38
Mean φ (2)				37	20	25.87

No. 1615. κ Virg. (*Con.*)

1902.	h	m	s	°	′	″
May 30	14	7	40.032	− 9	49	2.96
June 2			.013			3.46
			40.023			3.21
Mean φ (2)				37	20	25.82
1903.						
May 15			43.217			20.98
25			.203			20.25
			43.210			20.61
Mean φ (2)				37	20	26.48

No. 1616.

1902.						
May 23		7	51.718	−13	23	59.35
27			.698			59.15
			51.708			59.25

No. 1617.

1902.						
June 3		8	7.291	− 7	59	6.85
4			.341			7.17
			7.316			7.01

No. 1618.

1902.						
June 13		8	27.144	−11	22	45.29
16			.150			44.93
			27.147			45.11

No. 1619.

1902.						
June 6		9	6.997	− 6	35	51.84
9			7.075			51.70
			7.036			51.77

No. 1620.

1902.						
May 30		9	59.947	−17	44	38.00
June 2			.956			37.20
			59.952			37.60

No. 1621.

1901.						
June 3		10	25.595	−15	37	14.70
4			.559			15.21
			25.577			14.96

No. 1622.

1901.						
June 6		11	9.204	− 6	9	41.20
7			.198			41.42
			9.201			41.31

No. 1623.

1901.						
June 10		11	33.447	− 8	25	27.97
12			.426			28.73
			33.437			28.35

No. 1624.

1901.	h	m	s	°	′	″
June 13	14	11	35.316	−18	7	34.45
17			.250			34.26
			35.283			34.36

1902. **No. 1625.**

May 23		12	1.014	−19	30	32.45
27			0.998			32.26
			1.006			32.35

1902. **No. 1626.**

June 3		12	10.217	− 8	34	7 12
4			.308			7.36
			10.263			7.24

1902. **No. 1627.**

June 13		12	45.615	−14	27	28.61
16			.610			28.29
			45.612			28.45

1902. **No. 1628.**

June 6		12	47.521	− 7	30	46.18
9			.492			45.70
			47.506			45.94

1902. **No. 1629.**

May 30		13	12.989	−18	15	44.68
June 2			.978			44.56
			12.983			44.62

1901. **No. 1630.**

June 3		13	29.551	−11	36	22.28
4			.480			22.18
			29.515			22.23

1901. **No. 1631. λ Virg.**

June 6		13	45.126	−12	54	55.72
7			.092			56.55
			45.109			56.13
Mean φ (2)				37	20	26.14

1901. **No. 1632.**

June 10		14	41.095	− 6	17	24.90
27			40.943			24.46
			41.019			24.68

1901. **No. 1633.**

June 13		15	0 495	−17	4	24.13
17			.419			24.00
			0.457			24.06

No. 1634.

1902.	h	m	s	°	′	″
May 23	14	16	18.433	− 9	55	19.13
27			.462			19.53
			18.447			19.33

1901. **No. 1635.**

June 3		16	31.602	− 8	13	12.19
4			.542			12.16
			31.572			12.18

1903. **Anon.**

May 15		17	30.620	− 7	19	19.41
25			.652			20.43
			30.636			19.92

1902. **No. 1636.**

June 6		17	27.493	− 7	19	8.75
9			.474			8.48
			27.483			8.62

1901. **No. 1637. 2 Libr.**

June 6		18	5.871	−11	15	42.97
7			.928			42.80
10			.923			42.65
12			.937			42.84
			5.915			42 82
Mean φ (4)				37	20	25.78
1902.						
June 3			9.111			59.97
4			.118			59.01
			9.114			59.49
Mean φ (4)				37	20	26.26

1901. **No. 1638.**

June 13		18	27.530	−14	30	30.21
17			.544			30.60
			27.537			30.40

1902. **No. 1639.**

May 30		18	30.795	−12	29	45.28
June 2			.829			44.59
			30.812			44.93

1902. **No. 1640.**

June 13		18	35.149	−15	39	23.58
16			.166			23.18
			35 157			23.38

1902. **No. 1641.**

May 23		19	24.732	−11	13	29.43
27			.743			29.90
			24.737			29.66

No. 1642.

1901.	h	m	s	°	′	″
June 3	14	19	58.000	−19	31	18.27
4			.142			19 06
			58.071			18.67

1901. **No. 1643.**

June 6		21	5.676	−18	22	26.19
7			.589			25.84
			5.632			26.02

1901. **No. 1644.**

June 10		21	30.028	−17	12	22.70
12			29.984			23.08
			30.006			22.89

1901. **No. 1645.**

June 13		21	57.994	−14	23	31.17
17			.929			31.39
			57.961			31.28

1902. **No. 1646.**

May 23		22	26.387	−12	55	8.02
27			.395			8.00
			26.391			8.01

1902. **No. 1647.**

June 3		22	57.250	− 8	19	3.75
4			.277			3.50
			57.264			3.62

1901. **No. 1648.**

June 3		23	14.489	− 9	33	37.60
4			.474			37.32
			14.482			37.46

1901. **No. 1649.**

June 6		24	48.741	−14	48	32.66
7			.733			33.51
			48.737			33.08

1901. **No. 1650.**

June 10		25	3.744	−22	1	13.32
12			.764			13.55
			3.754			13.44

1901. **No. 1651.**

June 13		25	17.681	−20	16	38.48
17			.690			38.98
			17.686			38.73

No. 1652.

1902	h	m	s	°	'	"
May 23	14	26	1.300	−11	26	5.69
27			.250			5.91
			1.275			5.80

No. 1653.

1902.						
June 6		26	27.583	−12	45	28.24
9			.598			28.69
			27.590			28.46

No. 1654.

1901.						
June 3		26	29.873	−15	55	24.87
4			.964			24.46
			29.919			24.66

No. 1655.

1902.						
May 30		26	55.450	−17	26	51.99
June 2			.506			52.01
			55.478			52.00

No. 1656.

1902.						
June 3		26	55.723	−10	30	7.83
4			.729			7.72
			55.726			7.77

No. 1657.

1902.						
June 13		27	20.004	− 9	19	30.00
16			.025			29.68
			20.014			29.84

No. 1658.

1901.						
June 6		28	37.010	−19	5	2.28
7			36.952			3.03
			36.981			2.65

No. 1659. M 591.

1901.						
June 10		29	16.312	−20	0	17.47
12			.303			18.24
13			.330			17.75
17			.280			17.81
			16.306			17.82
Mean φ (4)				37	20	26.24
1902.						
May 23			19.687			33.79
27			.747			34.21
June 6			.664			34.50
9			.649			33.80
			19.687			34.07
Mean φ (4)				37	20	26.72

No. 1660.

1902.	h	m	s	°	'	"
June 3	14	30	34.028	−21	44	59.03
4			33.988			57.95
			34.008			58.49

No. 1661.

1902.						
June 13		30	35.223	− 8	8	48.49
16			.261			48.33
			35.242			48.41

No. 1662.

1902.						
May 30		30	58.277	−13	36	1.39
June 2			.358			0.84
			58.317			1.12

No. 1663.

1901.						
June 3		31	43.719	−11	53	4.29
4			.666			4.41
			43.692			4.35

No. 1664.

1901.						
June 6		33	41.030	−10	7	38.23
7			.011			37.89
			41.020			38.06

No. 1665.

1901.						
June 10		33	52.566	−17	27	33.73
12			.570			34.58
			52.568			34.16

No. 1666.

1901.						
June 13		34	40.055	−15	46	26.14
17			.031			27.15
			40.043			26.65

No. 1667.

1902.						
May 23		35	10.424	−13	37	31.55
27			.402			31.51
			10.413			31.53

No. 1669.

1902.						
May 30		35	30.654	−14	53	55.29
June 2			.672			55.95
			30.663			55.62

No. 1668.

1901.						
June 3		35	27.922	−22	11	36.16
4			.964			36.37
			27.943			36.26

No. 1670.

1902.	h	m	s	°	'	"
June 3	14	35	54.431	−19	30	27.03
4			.420			26.37
			54.426			26.70

No. 1671.

1901.						
June 6		36	38.423	−13	25	49.28
7			.366			49.60
			38.395			49.44

No. 1672.

1902.						
June 6		36	43.161	−11	48	57.38
9			.172			56.95
			43.166			57.16

No. 1673.

1901.						
June 10		36	57.971	−20	46	15.88
12			.991			16.37
			57.981			16.13

No. 1674.

1901.						
June 17		38	7.179	− 9	16	39.73
28			.162			40.46
			7.170			40.10

No. 1675.

1902.						
June 3		40	9.459	−16	19	47.21
4			.409			46.76
			9.434			46.99

No. 1676.

1901.						
June 6		40	21.152	−17	16	45.95
7			.120			46.06
			21.136			46.00

No. 1677.

1901.						
June 10		40	25.710	−22	44	2.81
12			.720			3.75
			25.715			3.28

No. 1678.

1902.						
May 23		40	32.794	−18	33	57.42
27			.821			57.56
			32.808			57.49

No. 1679. 5 Libr.

1901.						
June 3		40	30.137	−15	2	32.56
4			.141			32.27
			30.139			32.41
Mean φ (2)				37	20	25.88

No. 1679. 5 Libr. (*Con.*)

1902.	h	m	s	°	′	″
May 30	14	40	33.435	−15	2	48.20
June 2			.451			47.92
13			.414			47.88
16			.375			47.57
			33.419			47.89
Mean φ (4)				37	20	26.23

No. 1680.

1902.	h	m	s	°	′	″
June 6		40	37.279	−20	45	37.55
9			.226			37.50
			37.252			37.53

No. 1681.

1901.	h	m	s	°	′	″
June 13		41	35.882	−20	54	34.31
17			.819			34.11
			35.850			34.21

No. 1682.

1902.	h	m	s	°	′	″
May 30		42	34.027	−12	25	40.13
June 2			33.986			39.11
			34.007			39.62

No. 1683.

1901.	h	m	s	°	′	″
June 3		43	49.925	−10	24	54.02
4			.936			54.04
			49.930			54.03

No. 1684.

1901.	h	m	s	°	′	″
June 6		43	51.856	−19	29	31.00
7			.855			31.33
			51.855			31.16

No. 1685.

1901.	h	m	s	°	′	″
June 10		43	53.364	−13	44	11.13
12			.380			11.49
			53.372			11.31

No. 1686.

1902.	h	m	s	°	′	″
May 23		44	31.547	− 8	47	43.61
27			.570			43.63
			31.558			43.62

No. 1687.

1901.	h	m	s	°	′	″
June 13		45	12.575	−15	35	7.61
17			.504			.830
			12.539			7.96

No. 1688. *α* Libr.

1902.	h	m	s	°	′	″
June 3	14	45	27.283	−15	38	5.12
4			.290			4.91
6			.261			5.17
9			.353			4.81
			27.297			5.00
Mean φ (4)				37	20	26.59

No. 1689.

1902.	h	m	s	°	′	″
May 30		46	21.277	−17	57	6.42
June 2			.268			6.24
			21.272			6.33

No. 1690.

1902.	h	m	s	°	′	″
June 13		46	33.319	−17	6	18.73
16			.337			18.81
			33.328			18.77

No. 1691.

1901.	h	m	s	°	′	″
June 3		47	3.584	−14	58	51.61
4			.547			51.86
			3.566			51.74

No. 1692.

1901.	h	m	s	°	′	″
June 6		47	30.967	−12	14	13.52
7			.954			14.36
			30.961			13.94

No. 1693.

1901.	h	m	s	°	′	″
June 10		47	35.359	−23	3	44.26
12			.392			44.43
			35.375			44.34

No. 1694.

1902.	h	m	s	°	′	″
May 23		47	42.166	−21	12	12.53
27			.251			12.67
			42.209			12.60

No. 1695.

1901.	h	m	s	°	′	″
June 13		48	32.946	− 8	40	51.91
17			.915			52.84
			32.930			52.38

No. 1696.

1902.	h	m	s	°	′	″
June 3		48	38.481	−24	14	30.09
4			.542			30.07
			38.512			30.08

No. 1697.

1902.	h	m	s	°	′	″
June 6	14	49	3.538	−11	29	55.11
9			.582			55.39
			3.560			55.25

No. 1698.

1902.	h	m	s	°	′	″
May 30		49	32.346	−19	36	49.51
June 2			.300			49.12
			32.323			49.31

No. 1699.

1901.	h	m	s	°	′	″
June 3		50	26.947	−13	29	56.46
4			.880			57.31
			26.913			56.89

No. 1700.

1901.	h	m	s	°	′	″
June 6		50	44.050	−18	31	38.12
7			.038			39.27
			44.044			38.69

No. 1701.

1901.	h	m	s	°	′	″
June 10		50	48.532	−16	23	57.42
12			.527			57.66
			48.530			57.54

No. 1702. 15 Libr.

1902.	h	m	s	°	′	″
May 23		51	26.976	−11	0	51.21
27			.972			51.29
June 13			.979			51.66
16			27.024			51.72
			26.988			51.47
Mean φ (4)				37	20	26.25

No. 1703.

1901.	h	m	s	°	′	″
June 13		51	40.947	−20	58	8.59
17			41.023			9.74
			40.985			9.16

No. 1704.

1902.	h	m	s	°	′	″
June 3		52	25.523	−12	2	35.54
4			.559			35.80
			25.541			35.67

No. 1705.

1902.	h	m	s	°	′	″
May 30		52	36 372	−16	58	14.46
June 2			.373			14.99
			36.372			14.72

No. 1706.

1902.	h	m	s	°	′	″
June 6		53	3.116	−22	0	27.84
9			.150			28.00
			3.133			27.92

		h	m	s	°	′	″
	No. 1707.						
1902.	June 13	14	53	4.549	−23	27	27.08
	16			.652			26.69
				4.600			26.89
1901.	**No. 1708.**						
	June 3		53	23.466	−15	2	22.36
	4			.512			22.10
				23.489			22.23
1901.	**No. 1709.**						
	June 6		53	32.245	−10	44	45.38
	7			.223			46.04
				32.234			45.71
1901.	**No. 1710.**						
	June 10		54	23.447	−19	45	10.52
	12			.529			10.47
				23.488			10.50
1901.	**No. 1711.**						
	June 13		54	45.280	−14	20	2.63
	17			.248			3.53
				45.264			3.08
1902.	**No. 1712.**						
	May 23		54	50.660	−18	14	13.77
	27			.701			13.95
				50.680			13.86
1902.	**No. 1713.**						
	June 3		55	25 615	−24	45	36.21
	4			.653			36.52
				25.634			36.36
1901.	**No. 1714.**						
	June 3		56	48.301	−21	37	25.66
	4			.307			25.86
				48.304			25.76
1901.	**No. 1715.**						
	June 6		57	32.519	−17	14	33.22
	7			.496			34.40
				32.507			33.81
1901.	**No. 1716.**						
	June 10		57	42.856	−12	28	6.38
	12			.811			6 31
				42.833			6.34
	No. 1717.						
1901.	June 13	14	58	1.741	−16	12	10.35
	17			.677			10.96
				1.709			10.66
1902.	**No. 1718.** γ **Scorp.**						
	May 23		58	19.946	−24	53	49.59
	27			.947			49.38
				19.947			49.48
1902.	**No. 1719.**						
	May 30		58	42.424	−15	4	40.59
	June 2			.386			39.80
				42.405			40.19
1902.	**No. 1720.**						
	June 3		59	36.352	−22	37	53.89
	4			.403			53 69
				36.378			53.79
1902.	**No. 1721.**						
	May 30	15	0	12.927	−20	2	4.16
	June 2			.911			4.26
				12.919			4.21
1902.	**No. 1722.**						
	June 6		0	36.955	−13	52	34.07
	9			.967			34.61
				36.961			34.34
1901.	**No. 1723.**						
	June 3		0	37.367	−18	59	34.31
	4			.373			34.77
				37.370			34.54
1901.	**No. 1724.**						
	June 6		0	44.256	−21	38	48.56
	7			.249			49.31
				44.252			48.93
1901.	**No. 1725.**						
	June 10		1	6.197	−15	52	22.85
	12			.151			22.50
				6.174			22.67
1901.	**No. 1726.**						
	June 13		1	8.368	−12	31	23.55
	17			.360			24.11
				8.364			23.83
	No. 1727.						
1901.	June 27	15	1	29.747	−23	48	42 58
	28			.758			42.63
				29.753			42.60
1901.	**No. 1728.**						
	July 2		2	42.913	−11	40	9.90
	3			.901			8.70
	5			.984			9 65
				42.933			9.42
1902.	**No. 1729.**						
	May 30		3	11.753	−22	41	26.12
	June 2			.737			26.62
				11.745			26.37
1901.	**No. 1730.**						
	June 3		4	27.230	−25	57	18.76
	4			.213			19.88
				27.222			19.32
1902.	**No. 1731.**						
	June 3		4	39.458	−17	41	0.35
	4			.487			0.35
				39.472			0.35
1901.	**No. 1732.**						
	June 10		5	47.260	−12	40	45.12
	12			.211			45 67
				47.235			45.39
1901.	**No. 1733.**						
	June 13		5	51.395	−20	56	6.42
	17			.392			7.07
				51.394			6.74
1901.	**No. 1734.**						
	June 27		6	17.830	−14	51	24.96
	28			.867			24 75
				17.849			24.86
1901.	**No. 1735.**						
	July 2		6	17.958	−15	47	5.38
	3			.924			5.30
	5			.847			5.61
				17.910			5.43

No. 1736. ι Libr.

	h	m	s	°	′	″
1901.						
June 6	15	6	34.545	−19	25	1.70
7			.547			1.36
			34.546			1.53
Mean φ (2)				37	20	25.32
1902.						
May 30			38.038			16.12
June 2			.029			15.56
			38.033			15.84
Mean φ (2)				37	20	26.18

No. 1737.

	h	m	s	°	′	″
1901.						
June 3		7	40.751	−19	16	29.35
4			.641			29.90
			40.696			29.62

No. 1738.

	h	m	s	°	′	″
1902.						
June 6		7	44.962	−24	56	24.24
9			.953			24.13
			44.958			24.18

No. 1739.

	h	m	s	°	′	″
1902.						
June 3		8	3.232	−23	10	24.31
4			.278			24.10
			3.255			24.20

No. 1740.

	h	m	s	°	′	″
1901.						
June 10		8	50.062	−13	50	21.54
12			.053			21.32
			50.058			21.43

No. 1741.

	h	m	s	°	′	″
1901.						
June 13		8	58.437	−17	23	55.39
17			.433			56.29
			58.435			55.84

No. 1742.

	h	m	s	°	′	″
1901.						
June 27		10	38.476	−22	1	58.60
28			.498			60.69
			38.487			59.64

No. 1743.

	h	m	s	°	′	″
1901.						
July 2		11	21.522	−12	40	26.47
3			.574			26.35
5			.432			27.05
			21.509			26.62

No. 1744.

	h	m	s	°	′	″
1901.						
June 3		11	30.021	−15	12	45.76
4			29.997			45.34
			30.009			45.55

No. 1745.

	h	m	s	°	′	″
1901.						
June 6	15	12	4.847	−16	49	55.64
7			.786			56.18
			4.817			55.91

No. 1746.

	h	m	s	°	′	″
1901.						
June 10		12	9.300	−20	21	27.98
12			.245			28.32
			9.273			28.15

No. 1747.

	h	m	s	°	′	″
1901.						
June 13		13	20.821	−23	54	13.60
17			.738			14.02
			20.779			13.81

No. 1748.

	h	m	s	°	′	″
1901.						
June 27		14	11.266	−19	11	25.74
28			.298			25.74
			11.282			25.74

No. 1749.

	h	m	s	°	′	″
1901.						
July 2		14	42.022	−12	49	57.40
3			41.961			57.48
5			42.013			56.97
			41.999			57.28

No. 1750.

	h	m	s	°	′	″
1902.						
May 30		14	52.395	−25	37	54.00
June 2			.333			54.80
			52.364			54.40

No. 1751

	h	m	s	°	′	″
1901.						
June 6		15	16.837	−17	47	56.05
7			.798			57.02
			16.817			56.53

No. 1752

	h	m	s	°	′	″
1901.						
June 10		15	29.190	−15	11	28.78
12			.173			29.13
			29.181			28.96

No. 1753.

	h	m	s	°	′	″
1901.						
June 13		16	36.673	−22	37	17.58
17			.641			17.63
			36.657			17.60

No. 1754. 30 Libr.

	h	m	s	°	′	″
1901.						
June 27		17	30.361	−14	46	49.96
28			.391			49.77
			30.376			49.86
Mean φ (2)				37	20	25.15

No. 1754. 30 Libr. (*Con.*)

	h	m	s	°	′	″
1902.						
June 3	15	17	33.710	−14	47	3.58
4			.681			3.62
6			.726			3.52
9			.745			3.75
			33.716			3.62
Mean φ (4)				37	20	26.10

No. 1755.

	h	m	s	°	′	″
1901.						
July 2		17	56.794	−16	12	36.92
3			.722			36.85
5			.741			36.89
			56.752			36.89

No. 1756.

	h	m	s	°	′	″
1901.						
June 3		18	26.262	−12	0	58.67
4			.180			58.37
			26.221			58.52

No. 1757.

	h	m	s	°	′	″
1901.						
June 6		18	27.780	−20	29	27.28
7			.738			26.66
			27.759			26.97

No. 1758.

	h	m	s	°	′	″
1901.						
June 10		18	35.074	−13	57	27.22
12			.050			27.10
			35.062			27.16

No. 1759.

	h	m	s	°	′	″
1902.						
May 30		18	50.304	−25	19	9.82
June 2			.221			10.05
			50.263			9.93

No. 1760.

	h	m	s	°	′	″
1902.						
June 3		19	5.952	−23	9	41.05
4			.933			40.86
			5.943			40.96

No. 1761.

	h	m	s	°	′	″
1902.						
June 6		19	15.970	−21	41	47.61
9			.948			47.61
			15.959			47.61

No. 1762.

	h	m	s	°	′	″
1901.						
June 13		20	14.012	−18	10	2.06
17			13.964			1.90
			13.988			1.98

No. 1763.

1901.	h	m	s	°	′	″
June 27	15	21	8.838	-19	39	28.63
28			.927			29.49
			8.882			29.06

1902. **No. 1764.**

1902.	h	m	s	°	′	″
June 3		22	13.742	-14	36	44.81
4			.734			44.48
			13.738			44.65

1901. **No. 1765. 32 Libr.**

1901.	h	m	s	°	′	″
June 3		22	40.298	- 16	22	16.92
4			.316			16.57
July 2			.332			[15.02]
3			.305			16.75
5			.341			16.54
			40.318			16.69
Mean φ (4)				37	20	25.56
1902.						
May 30			43.712			29.78
June 2			.646			29.89
6			.691			29.55
9			.711			29.96
			43.690			29.79
Mean φ (4)				37	20	26.16

1901. **No. 1766.**

1901.	h	m	s	°	′	″
June 6		24	52.866	-20	23	16.15
7			.821			16.63
			52.843			16.39

1901. **No. 1767.**

1901.	h	m	s	°	′	″
June 10		25	5.217	-16	16	10.71
12			.199			10.65
			5.208			10.68

1901. **No. 1768.**

1901.	h	m	s	°	′	″
June 3		26	19.510	-18	8	56.83
4			.534			55.99
			19.522			56.41

1901. **No. 1769.**

1901.	h	m	s	°	′	″
June 13		26	24.211	-21	37	45.53
17			.239			46.41
			24.225			45.97

1901. **No. 1770. M. 622.**

1901.	h	m	s	°	′	″
June 27		26	55.391	-19	19	59.46
28			.347			59.94
			55.369			59.70
Mean φ (2)				37	20	25.61

No. 1771.

1901.	h	m	s	°	′	″
July 2	15	27	13.103	-25	27	[51.13]
3			.149			52.62
5			.144			53.14
			13.132			52.88

1902. **No. 1772.**

1902.	h	m	s	°	′	″
May 30		27	21.491	-24	9	28.71
June 2			.473			29.46
			21.482			29.08

1902. **No. 1773.**

1902.	h	m	s	°	′	″
June 3		27	22.955	-16	31	13.68
4			.883			13.57
			22.919			13.63

1902. **No. 1774.**

1902.	h	m	s	°	′	″
June 6		27	29.757	-23	8	1.53
9			.724			1.76
			29.740			1.64

1901. **No. 1775.**

1901.	h	m	s	°	′	″
June 6		27	47.060	-12	40	42.28
7			.050			42.50
			47.055			42.39

1901. **No. 1776. γ Libr.**

1901.	h	m	s	°	′	″
June 10		29	59.215	-14	27	33.62
12			.212			33.54
13			.234			33.64
17			.225			33.60
			59.221			33.60
Mean φ (4)				37	20	26.11

1901. **No. 1777.**

1901.	h	m	s	°	′	″
June 3		31	20.915	-15	11	9.16
4			.917			8.90
			20.916			9.03

1901. **No. 1778.**

1901.	h	m	s	°	′	″
June 6		31	32.104	-25	57	8.08
7			.017			8.60
			32.061			8.34

1902. **No. 1779.**

1902.	h	m	s	°	′	″
May 30		32	2.325	-22	49	0.40
June 2			.245			0.88
			2.285			0.64

No. 1780.

1901.	h	m	s	°	′	″
June 27	15	32	29.232	-24	19	46.36
28			.280			46.69
			29.256			46.52

1901. **No. 1781.**

1901.	h	m	s	°	′	″
July 2		32	30.874	-20	41	[20.22]
3			.819			21.85
5			.806			21.55
			30.833			21.70

1901. **No. 1782.**

1901.	h	m	s	°	′	″
June 10		33	3.631	-17	20	22.78
12			.572			23.17
			3.601			22.97

1902. **No. 1783.**

1902.	h	m	s	°	′	″
June 6		33	15.985	-18	58	45.09
9			16.018			45.26
			16.001			45.17

1902. **No. 1784.**

1902.	h	m	s	°	′	″
June 3		33	16.705	-22	9	12.34
4			.714			12.46
			16.710			12.40

1901. **No. 1785. 42 Libr.**

1901.	h	m	s	°	′	″
June 6		34	25.614	-23	29	47.06
7			.571			47.43
13			.612			47.11
17			.618			47.91
			25.604			47.38
Mean φ (4)				37	20	26.01

1901. **No. 1786.**

1901.	h	m	s	°	′	″
June 3		34	42.609	-25	16	14.57
4			.628			14.55
			42.618			14.56

1902. **No. 1787.**

1902.	h	m	s	°	′	″
May 30		35	7.805	-16	26	16.57
June 2			.826			16.21
			7.815			16.39

1901. **No. 1788.**

1901.	h	m	s	°	′	″
June 27		35	45.231	-13	39	3.26
28			.211			3.15
			45.221			3.20

			No. 1789.			
1901.	h	m	s	°	′	″
June 12	15	36	14.441	−19	21	28.67
July 5			[.241]			28.38
			14:441			28.52
1901.			**No. 1790.**			
July 2		36	57.716	−18	17	23.82
3			.775			25.19
			57.746			24.50
1901.			**No. 1791.**			
June 6		37	34.115	−20	48	5.51
7			.040			5.33
			34.077			5.42
1901.			**No. 1792.**			
June 3		37	39.142	−12	44	18.39
4			.107			17.92
			39.124			18.15
1902.			**No. 1793.**			
June 3		37	55.084	−14	43	44.32
4			.147			44.95
			55.115			44.63
1901.			**No. 1794.**			
June 13		38	20.236	−16	33	20.22
17			.145			19.91
			20.191			20.06
1902.			**No. 1795.**			
May 30		38	28.319	−24	5	6.30
June 2			.254			6.71
			28.286			6.50
1902.			**No 1796. η Libr.**			
June 6		38	33.536	−15	21	38.66
9			.521			39.37
			33.528			39.01
Mean φ (2)				37	20	26.80
1901.			**No. 1797.**			
June 10		39	50.529	−25	11	6.17
12			.461			5.00
			50.495			5.58
1901.			**No. 1798.**			
June 27		39	53.333	−22	26	31.09
28			.379			30.99
			53.356			31.04

			No. 1799.			
1901.	h	m	s	°	′	″
June 3	15	40	48.292	−15	51	5.62
4			.309			5.67
			48.301			5.64
1901.			**No. 1800.**			
June 6		41	20.231	−26	46	46.18
7			.222			46.98
			20.226			46.58
1901.			**No. 1801.**			
June 13		41	35.961	−20	9	32.15
17			.931			32.23
			35.946			32.19
1901.			**No. 1802.**			
June 3		44	9.050	−21	11	16.35
4			.031			16.80
			9.041			16.57
1901.			**No. 1803.**			
June 6		44	12.412	−17	35	57.94
7			.389			58.36
			12.401			58.15
1901.			**No. 1804.**			
June 10		44	48.250	−22	57	21.87
12			.295			22.42
			48.272			22.14
1901.			**No. 1805.**			
June 13		45	1.401	−25	27	1.56
17			.391			1.92
			1.396			1.74
1901.			**No. 1806.**			
June 27		45	56.044	−18	38	22.44
28			.066			22.64
			56.055			22.54
1901.			**No. 1807.**			
July 2		46	4.254	−14	33	53.92
3			.191			54.44
5			.153			55.29
			4.199			54.55
1902.			**No. 1808.**			
May 30		46	9.874	−13	50	17.13
June 2			.889			17.05
			9.881			17.09

			No. 1809. λ Libr.			
1901.	h	m	s	°	′	″
June 3	15	47	35.173	−19	52	16.22
4			.161			15.85
			35.167			16.03
Mean φ (2)				37	20	25.50
1902.			**No. 1810.**			
June 3		47	43.570	−25	2	4.88
4			.592			5.48
			43.581			5.18
1901.			**No. 1811.**			
June 10		47	59.015	−24	14	17.53
12			58.995			17.82
			59.005			17.67
1901.			**No. 1812.**			
June 13		48	2.302	−23	41	0.15
17			.185		40	59.86
			2.244		41	0.00
1901.			**No. 1813.**			
June 6		48	11.189	−16	26	19.49
7			.254			19.62
			11.221			19.56
1902.			**No. 1814.**			
May 30		48	32.064	−27	2	52.73
June 2			.062			52.87
			32.063			52.80
1901.			**No. 1815.**			
June 27		48	50.708	−22	28	22.44
28			.700			22.64
			50.704			22.54
1901.			**No. 1816.**			
July 2		49	16.983	−19	5	25.56
3			17.006			26.51
5			16.886			26.67
			16.958			26.25
1902.			**No. 1817.**			
June 3		49	34.589	−25	58	39.07
4			.640			38.91
			34.614			38.99
1901.			**No. 1818.**			
June 6		50	9.235	−17	44	24.87
7			.296			25.77
			9.266			25.32

No. 1819.

1901.	h	m	s	°	′	″
June 3	15	51	24.361	−21	11	53.06
4			.340			52.69
			24.350			52.87

No. 1820.

1901.						
June 10		52	38.576	−24	32	46.64
12			.529			45.65
			38.553			46.14

No. 1821.

1901.						
June 13		52	38.691	−13	59	37.50
17			.557			37.71
			38.624			37.60

No. 1822.

1901.						
June 27		52	39.746	−15	11	31.53
28			.822			31.13
			39.784			31.33

No. 1823. *π* **Scorp.**

1901.						
July 2		52	51.679	−25	49	44.21
3			.672			44.84
5			.649			45.28
			51.667			44.78
Mean φ (3)				37	20	25.98
1902.						
June 3			55.325			56.35
4			.313			56.19
			55.319			56.27
Mean φ (2)				37	20	26.90

No. 1824.

1902.						
May 30		53	26.270	−19	39	27.10
June 2			.274			27.25
			26.272			27.18

No. 1825.

1901.						
June 6		53	37.703	−23	54	44.48
7			.772			45.68
			37.738			45.08

No. 1826. *δ* **Scorp.**

1901.						
July 11		54	28.660	−22	20	24.64
12			.681			24.68
			28.670			24.66
Mean φ (2)				37	20	26.96

No. 1827.

1901.	h	m	s	°	′	″
June 3	15	54	46.125	−16	14	30.46
4			.163			30 66
			46.144			30.56

No. 1828.

1901.						
June 10		55	16.310	−18	40	58.39
12			.267			58.49
			16.289			58.44

No. 1829.

1901.						
June 13		55	17.913	−20	52	32.40
17			.854			32.63
			17.883			32.51

No. 1830.

1901.						
June 27		56	57.037	−17	53	43.56
28			.005			43.88
			57.021			43.72

No. 1831.

1901.						
July 2		57	21.794	−19	33	54.06
3			.799			54.89
5			.757			55.69
			21.783			54.88

No. 1832.

1901.						
July 11		57	21.546	−25	35	21.43
12			.546			21.23
			21.546			21.33

No. 1833.

1901.						
June 3		57	57.842	−24	27	10.66
4			.904			10.61
			57.873			10.63

No. 1834.

1901.						
June 6		58	58.827	−26	40	34.72
7			.858			34.63
			58.842			34.68

No. 1835. *β* **Scorp.**

1901.						
June 10		59	40.707	−19	32	4.61
12			.724			4.56
			40.715			4.58
Mean φ (2)				37	20	26.39
1902.						
May 30			44.212			14.83
June 2			.218			14.89
3			.238			14.42
4			.271			15.22
			44.235			14.84
Mean φ (4)				37	20	26.59

No. 1836.

1901.	h	m	s	°	′	″
June 13	15	59	53.245	−21	34	6.48
17			.285			6.77
			53.265			6.63

No. 1837.

1901.						
July 16	16	0	11.971	−23	20	11.25
18			.976			12.09
			11.973			11.67

No. 1838.

1901.						
July 11		0	30.613	−15	12	0.16
12			.668		11	59.82
			30.640		11	59.99

No. 1839.

1901.						
June 3		1	0.905	−20	24	3.88
4			.842			4.10
			0.873			3.99

No. 1840.

1901.						
July 8		1	25.421	−16	40	32.89
9			.482			33.73
			25.451			33.31

No. 1841.

1901.						
July 2		1	32.118	−13	48	17.60
3			.076			17.48
5			.039			17.73
			32.078			17.60

No. 1842. *ω_2* **Scorp.**

1901.						
June 27		1	35.864	−20	36	5.09
28			.861			4.51
			35.862			4.80
Mean φ (2)				37	20	25.96

No. 1843.

1901.						
June 6		2	5.472	−26	3	42.07
7			.419			42.04
			5.445			42.06

No. 1844.

1901.						
June 10		2	48.851	−23	25	15.83
12			.806			15.97
			48.828			15.90

No. 1845.

1901.						
June 13		4	12.743	−24	19	16.74
17			.660			16.65
			12.702			16.70

No. 1846.

1901.	h	m	s	°	′	″
June 3	16	4	13.155	−18	4	40.62
4			.107			40.87
			13.131			40.74

No. 1847.

1901.	h	m	s	°	′	″
June 6		5	29.747	−26	53	33.58
7			.723			32.87
			29.735			33.22

No. 1848.

1901.	h	m	s	°	′	″
June 10		6	0.172	−22	17	14.96
12			.177			15.13
			0.174			15.04

No. 1849.

1901.	h	m	s	°	′	″
June 27		6	12.206	−27	40	10.88
28			.218			10.60
			12.212			10.74

No. 1850.

1901.	h	m	s	°	′	″
July 2		6	14.376	−19	12	[10.35]
3			.458			13.09
5			.340			13.75
			14.391			13.42

No. 1851.

1901.	h	m	s	°	′	″
June 13		7	12.731	−15	45	44.38
17			.705			44.36
			12.718			44.37

No. 1852.

1901.	h	m	s	°	′	″
July 8		7	35.369	−14	51	45.40
9			.342			45.79
			35.356			45.60

No. 1853.

1901.	h	m	s	°	′	″
June 3		7	48.197	−24	10	7.98
4			.147			7.96
			48.172			7.97

No. 1854.

1901.	h	m	s	°	′	″
July 11		7	51.122	−21	8	50.21
12			.127			49.76
			51.124			49.98

No. 1855.

1901.	h	m	s	°	′	″
July 16		8	6.032	−23	31	18.14
18			.008			18.29
			6.020			18.21

No. 1856.

1901.	h	m	s	°	′	″
June 6	16	8	53.391	−25	13	33.15
7			.417			33.70
			53.404			33.42

No. 1857.

1901.	h	m	s	°	′	″
June 10		8	56.371	−18	16	53.61
12			.395			54.03
			56.383			53.82

No. 1858.

1901.	h	m	s	°	′	″
July 2		9	0.946	−22	7	45.93
3			.951			45.78
5			.866			45.53
			0.921			45.75

No. 1859.

1901.	h	m	s	°	′	″
June 27		9	14.936	−26	57	24.69
28			.925			24.28
			14.930			24.49

No. 1860.

1901.	h	m	s	°	′	″
June 13		10	16.106	−14	36	3.90
17			.037			3.70
			16.071			3.80

No. 1861.

1901.	h	m	s	°	′	″
July 8		11	11.877	−19	51	28.96
9			.871			29.31
			11.874			29.14

No. 1862.

1901.	h	m	s	°	′	″
June 3		12	45.742	−17	8	38.74
4			.730			39.02
			45.736			38.88

No. 1863.

1901.	h	m	s	°	′	″
June 6		13	19.760	−19	58	35.38
7			.767			35.73
			19.763			35.56

No. 1864.

1901.	h	m	s	°	′	″
June 10		13	47.934	−15	18	20.71
12			.905			20.32
			47.919			20.51

No. 1865.

1901.	h	m	s	°	′	″
June 27		14	40.679	−23	55	51.29
28			.664			50.63
			40.672			50.96

No. 1866.

1901.	h	m	s	°	′	″
July 2	16	14	45.035	−18	27	6 65
3			.049			6.54
5			.002			7.22
			45.029			6.80

No. 1867.

1901.	h	m	s	°	′	″
July 16		14	51.381	−21	36	10.19
18			.425			10.25
			51.403			10.22

No. 1868. σ Scorp.

1901.	h	m	s	°	′	″
June 13		15	10.157	−25	21	19.51
17			.155			19.30
25			.197			19.20
July 8			.121			19.01
9			.161			19.11
			10.158			19.23
Mean φ (5)				37	20	26.08
1902.						
June 13			13.800			28.44
16			.869			27.56
23			.777			28.21
25			.720			28.24
July 2			.847			28.12
7			.810			28.75
			13.804			28.22
Mean φ (6)				37	20	26.79

No. 1869.

1901.	h	m	s	°	′	″
July 11		15	13.031	−26	59	40.88
12			.158			40.42
			13.094			40.65

No. 1870.

1901.	h	m	s	°	′	″
June 3		16	56.675	−22	53	5.33
4			.647			5 63
			56.661			5.48

No. 1871.

1901.	h	m	s	°	′	″
June 6		17	12.748	−16	47	9.53
7			.684			10.24
			12.716			9.89

No. 1872. ψ Oph.

1901.	h	m	s	°	′	″
June 10		18	18.501	−19	48	21.06
12			.462			19.88
27			.511			20.22
28			.435			20.67
July 16			.444			20.38
18			.442			20.26
			18.466			20.41
Mean φ (6)				37	20	25.88

No. 1873.

1901.	h	m	s	°	′	″
June 13	16	18	24.944	−26	55	13.49
17			.926			14.18
			24.935			13.83

No. 1874.

1901.	h	m	s	°	′	″
July 8		19	25.519	−24	14	14.71
9			.488			14.78
			25.504			14.74

No. 1875. ρ Oph. s. f.

1901.	h	m	s	°	′	″
July 2		19	38.866	−23	13	9.07
3			.857			10.37
5			.837			9.47
			38.853			9.64

No. 1875. ρ Oph. n. p.

1902.	h	m	s	°	′	″
June 13			43.392			14.81
16			.399			14.42
23			.383			14.71
25			.405			14.55
July 2			.457			15.01
7			.408			14.47
			43.407			14.66
Mean φ (6)				37	20	26.49

No. 1876.

1901.	h	m	s	°	′	″
July 11		19	39.283	−19	36	31.77
12			.378			31.77
			39.330			31.77

No. 1877.

1901.	h	m	s	°	′	″
June 4		21	3.987	−26	2	0.15
25			4.010		1	59.75
			3.998		1	59.95

No. 1878. χ Oph.

1901.	h	m	s	°	′	″
June 6		21	17.087	−18	13	54.43
7			.095			54.32
			17.091			54.37
Mean φ (2)				37	20	25.88

No. 1879.

1901.	h	m	s	°	′	″
June 10		21	21.663	−21	53	42.07
12			.629			42.29
			21.646			42.18

No. 1880.

1901.	h	m	s	°	′	″
June 13		22	36.879	−15	59	25.02
17			.851			25.26
			36.865			25.14

No. 1881. α Scorp.

1901.	h	m	s	°	′	″
July 2	16	23	20.172	−26	12	44.60
3			.135			45.29
			20.153			44.94
Mean φ (2)				37	20	26.60

No. 1882.

1901.	h	m	s	°	′	″
June 28		23	28.004	−21	20	59.64
July 5			27.955			58.22
			27.980			58.93

No. 1883.

1901.	h	m	s	°	′	″
July 11		23	57.535	−18	27	22.92
12			.545			22.37
			57.540			22.64

No. 1884.

1901.	h	m	s	°	′	″
July 8		24	7.340	−27	41	54.09
9			.316			55.55
			7.328			54.82

No. 1885.

1901.	h	m	s	°	′	″
June 3		24	11.103	−14	20	0.24
4			.054			0.76
			11.078			0.50

No. 1886.

1901.	h	m	s	°	′	″
July 16		24	11.455	−24	53	51.34
18			.475			50.69
			11.465			51.01

No. 1887.

1901.	h	m	s	°	′	″
June 6		25	18.103	−26	19	20.26
7			.122			20.38
			18.113			20.32

No. 1888. φ Oph.

1901.	h	m	s	°	′	″
June 13		25	28.259	−16	23	49.11
17			.264			48.64
			28.261			48.87
Mean φ (2)				37	20	26.10

No. 1889.

1901.	h	m	s	°	′	″
June 10		25	42.137	−22	35	13.68
12			.061			13.63
			42.099			13.66

No. 1890.

1901.	h	m	s	°	′	″
June 27		25	55.814	−17	29	57.83
28			.796			57.44
			55.805			57.63

No. 1891. ω Oph.

1901.	h	m	s	°	′	″
July 16	16	26	15.945	−21	15	16.74
18			.926			16.45
			15.936			16.60

No. 1892.

1901.	h	m	s	°	′	″
July 2		26	35.816	−20	32	23.73
3			.820			24.80
5			.728			24.57
			35.788			24.37

No. 1893.

1901.	h	m	s	°	′	″
July 8		27	52.161	−24	4	49.88
9			.161			50.43
			52.161			50.16

No. 1894.

1901.	h	m	s	°	′	″
June 3		28	24.278	−15	19	8.95
4			.271			8.75
			24.274			8.85

No. 1895.

1901.	h	m	s	°	′	″
June 6		28	58.982	−19	44	2.81
25			.983			2.29
			58.982			2.55

No. 1896. τ Scorp.

1901.	h	m	s	°	′	″
June 10		29	43.101	−28	0	38.60
12			.122			38.52
July 11			.053			37.99
12			.048			38.31
			43.081			38.36
Mean φ (4)				37	20	26.06
1902.						
June 13			46.794			46.03
16			.787			46.55
23			.799			46.29
25			.802			46.57
July 2			.756			46.69
7			.797			46.62
			46.789			46.46
Mean φ (6)				37	20	26.71

No. 1897.

1901.	h	m	s	°	′	″
June 13		29	44.723	−18	28	4.30
17			.688			4.58
			44.705			4.44

No. 1898.

1901.	h	m	s	°	′	″
June 27		29	50.292	−25	10	33.89
28			.224			34.60
			50.258			34.24

No. 1899.

1901.	h m s	° ′ ″
July 2	16 30 46.580	−14 26 ....
3	.669	15.01
5	.651	15.33
	46.633	15.17

No. 1900.

1901.		
July 11	31 44.718	−21 51 17.60
12	.745	17.58
	44.731	17.59

No. 1901.

1901.		
July 8	31 55.910	−16 38 57.23
9	.906	57.83
	55.908	57.53

No. 1902.

1901.		
June 3	32 23.316	−22 41 32.06
4	.373	32.15
	23.345	32.10

No. 1903.

1901.		
June 6	32 29.509	−26 47 25.96
25	.485	24.55
	29.497	25.26

No. 1904.

1901.		
June 10	32 44.028	−18 1 16.57
12	.083	17.10
	44.056	16.83

No. 1905.

1901.		
June 13	32 48.638	−18 37 37.45
17	.636	38.27
	48.637	37.86

No. 1906.

1901.		
June 27	34 7.863	−26 7 37.38
28	.887	37.31
	7.875	37.34

No. 1907.

1901.		
July 2	34 44.188	−20 12 55.60
3	.253	55.82
5	.231	55.76
	44.224	55.73

No. 1908.

1901.		
July 8	35 24.988	−15 9 47.89
9	.982	48.07
	24.985	47.98

No. 1909.

1901.	h m s	° ′ ″
July 11	16 35 36.053	−24 16 34.43
12	.068	33.54
	36.061	33.98

No. 1910.

1901.		
June 10	35 50.745	−17 33 1.89
12	.748	2.33
	50.746	2.11

No. 1911.

1901.		
June 6	35 52.200	−16 44 30.39
25	.251	29.27
	52.225	29.83

No. 1912. Br. 2115.

1901.		
June 3	36 4.459	−19 44 4.93
4	.445	5.24
	4.452	5.08
Mean φ (2)		37 20 26.57
1902.		
June 13	8.018	11.36
16	7.987	11.85
	8.003	11.61

No. 1913.

1901.		
June 13	37 8.915	−21 9 15.30
17	.885	15.18
	8.900	15.24
1902.		
June 23	12.461	22.43
25	.512	22.26
	12.486	22.34

No. 1914.

1901.		
June 27	38 8.800	−27 16 12.57
28	.731	12.35
	8.766	12.46

No. 1915.

1901.		
July 11	38 48.533	−28 19 31.07
12	.608	31.28
	48.570	31.18

No. 1916. 15 Oph.

1901.		
July 2	39 11.257	−22 59 ....
3	.326	58.77
5	.263	58.24
8	.314	58.19
9	.292	58.89
	11.290	58.52
Mean φ (4)		37 20 25.75

No. 1916. 15 Oph. (*Con.*)

1902.	h m s	° ′ ″
June 13	16 39 14.940	−23 0 5.06
16	.876	6.12
	14.908	5.59

No. 1917.

1901.		
June 6	39 42.774	−18 57 15.69
25	.826	15.23
	42.800	15.46

No. 1918.

1901.		
June 3	40 23.327	−16 43 7.44
4	.304	8.10
	23.316	7.77

No. 1919.

1901.		
June 10	40 47.622	−25 20 53.79
12	.584	54.33
	47.603	54.06

No. 1920.

1901.		
June 13	43 2.040	−28 56 50.39
17	.007	50.28
	2.023	50.33

No. 1921.

1901.		
June 27	43 10.590	−20 16 51.88
28	.576	52.40
	10.583	52.14
1902.		
June 13	14.106	58.71
16	.116	58.66
	14.111	58.68

No. 1922.

1901.		
July 2	43 40.625	−21 40 41.57
3	.694	42.54
5	.653	42.04
	40.657	42.05
1902.		
July 2	44.246	49.08
7	.217	49.29
	44.232	49.19

No. 1923.

1901.		
July 8	43 42.742	−24 28 0.57
9	.751	0.29
	42.746	0.43

No. 1924.

1901.		
June 3	43 48.337	−15 29 41.68
4	.374	41.40
	48.355	41.54

No. 1925.

1901.	h	m	s	°	′	″
June 6	16	44	0.989	-23	16	32.62
25			.961			33.56
			0.975			33.09
1902.						
June 23			4.551			40.22
25			.566			39.06
			4.559			39.64

No. 1926.

1901.						
June 10		44	1.686	-18	5	16.21
12			.663			15.29
			1.675			15.75

No. 1927.

1901.						
July 11		44	3.404	-26	34	10.19
12			.386			10.05
			3.395			10.12

No. 1928.

1901.						
July 16		44	54.647	-27	48	33.97
18			.632			34.79
			54.640			34.38

No. 1929.

1901.						
June 13		45	14.118	-16	22	34.24
17			.040			34.41
			14.079			34.33

No. 1930.

1901.						
June 27		45	22.398	-19	0	59.82
28			.334			60.39
			22.366		1	0.10

No. 1931.

1901.						
June 3		47	34.421	-20	15	0.61
4			.447			0.45
			34.434			0.53

No. 1932.

1901.						
June 6		48	11.919	-17	48	45.19
25			.932			45.62
			11.926			45.40

No. 1933.

1901.						
June 10		48	15.897	-25	39	56.58
12			.881			56.11
			15.889			56.34

No. 1934.

1901.	h	m	s	°	′	″
June 13	16	48	43.602	-21	43	2.51
17			.513			1.99
			43.558			2.25
1902.						
June 13			47.111			8.43
16			.123			8.76
			47.117			8.60

No. 1935.

1901.						
June 27		48	55.599	-24	20	48.60
28			.650			48.28
			55.624			48.44

No. 1936.

1901.						
July 2		50	18.861	-16	38	55.69
3			.932			55.23
5			.885			54.32
			18.893			55.08

No. 1937.

1901.						
July 8		50	49.430	-26	47	41.01
9			.414			40.76
			49.422			40.88

No. 1938. 24 Oph.

1901.						
June 3		50	49.685	-22	59	....
4			.693			35.43
26			.716			33.99
July 11			.671			35.08
12			.656			34.80
16			.678			34.82
18			.716			35.79
			49.688			34.98
Mean φ (6)					37 20	26.27
1902.						
June 23			53.266			42.75
25			.349			41.36
			53.307			42.06

No. 1939.

1901.						
June 6		51	43.548	-27	27	19.96
25			.516			19.23
			43.532			19.60

No. 1940.

1901.						
June 10		52	3.756	-19	38	12.31
12			.693			12.27
			3.724			12.29

No. 1941.

1901.						
June 13		53	17.941	-15	39	31.43
17			.932			31.08
			17.936			31.26

No. 1942.

1901.	h	m	s	°	′	″
June 27	16	53	53.932	-24	56	31.28
28			54.023			32.02
			53.977			31.65

No. 1943.

1901.						
July 2		54	5.576	-24	50	18.30
3			.585			18.48
			5.580			18.39

No. 1944.

1901.						
July 8		54	15.234	-28	29	7.60
9			.227			7.56
			15.230			7.58

No. 1945.

1901.						
June 3		54	35.715	-21	18	39.60
4			.636			39.57
			35.675			39.58
1902.						
June 13			39.201			45.38
16			.244			45.62
			39.222			45.50

No. 1946.

1901.						
June 6		55	23.309	-20	17	23.77
25			.343			23.90
			23.326			23.83

No. 1947.

1901.						
June 10		55	27.475	-17	11	55.29
July 5			.408			54.30
			27.442			54.80

No. 1948.

1901.						
July 11		56	3.686	-18	44	23.70
12			.672			23.10
			3.679			23.40

No. 1949.

1901.						
June 13		56	54.978	-26	57	18.26
17			.946			19.17
			54.962			18.71

No. 1950.

1901.						
June 27		57	22.853	-23	0	34.02
28			.836			34.14
			22.844			34.08
1902.						
June 23			26.454			40.92
25			.511			40.24
			26.483			40.58

	h	m	s	°	′	″
	No. 1951.					
1901.						
June 3	16	57	55.215	−25	33	25.67
4			.180			25.35
			55.198			25.51
1901.	**No. 1952.**					
July 2		57	59.349	−15	43	31.16
3			.423			30.69
5			.405			30.48
			59.392			30.78
1901.	**No. 1953.**					
July 8		58	13.367	−28	26	8.86
9			.407			.909
			13.387			8.97
1901.	**No. 1954. Br. 2160.**					
June 6		58	38.025	−25	30	16.25
25			37.970			15.40
26			37.985			15.17
			37.993			15.61
Mean φ (3)				37	20	26.01
1901.	**No. 1955.**					
June 10		58	53.324	−20	21	20.25
12			.335			20.22
			53.329			20.23
1901.	**No. 1956.**					
June 13	17	0	17.066	−21	25	38.89
17			.043			38.29
			17.054			38.59
1902.						
June 13			20.682			43.50
16			.685			43.78
			20.683			43.64
1901.	**No. 1957.**					
June 27		0	45.081	−26	22	43.65
28			.120			44.44
			45.100			44.04
1901.	**No. 1958.**					
July 2		1	52.142	−24	52	1.46
5			.153			0.81
			52.148			1.13
1901.	**No. 1959.**					
June 3		2	29.831	−17	28	39.93
4			.864			39.73
			29.848			39.83

	h	m	s	°	′	″
	No. 1960.					
1901.						
June 6	17	2	34.556	−23	5	46.36
25			.506			46 97
			34.531			46.66
1902.						
June 23			38.175			51.56
25			.154			50.89
			38.165			51.22
1901.	**No. 1961.**					
June 10		4	25.255	−19	18	38.68
12			.323			38.00
			25.289			38.34
1901.	**No. 1962.**					
July 8		5	29.792	−20	18	4.17
9			.872			5.02
			29.832			4.60
1901.	**No. 1963.**					
July 2		5	40.176	−29	20	59.55
5			.135			59.28
			40.156			59.41
1901.	**No. 1964.**					
June 13		5	47.341	−16	22	9.34
17			.361			8.68
26			.287			9.04
			47.330			9.02
1901.	**No. 1965.**					
June 3		6	8.617	−25	7	57.88
4			.625			57.25
			8.621			57.56
1901.	**No. 1966.**					
June 6		6	13.038	−27	38	24.20
25			.038			24.39
			13.038			24.30
1901.	**No. 1967.**					
June 27		6	24.706	−22	48	15.49
28			.659			16.45
			24.683			15.97
1902.						
June 13			28.310			20.38
16			.359			21.06
			28.335			20.72

	h	m	s	°	′	″
	No. 1968.					
1901.						
July 11	17	6	44.033	−21	29	9.96
12			43.962			9.03
			43.997			9.50
1902.						
June 23			47.535			13.75
25			.588			14.03
			47.561			13.89
1901.	**No. 1969.**					
June 10		8	8.087	−18	6	4.92
12			.097			4.81
			8.092			4.87
1901.	**No. 1970.**					
June 17		9	2.631	−19	44	54.69
26			.619			54.47
			2.625			54.58
1901.	**No. 1971.**					
July 2		9	4.435	−26	25	1.89
5			.408			0.86
			4.422			1.37
1901.	**No. 1972.**					
July 11		10	58.183	−17	48	12.47
12			.199			12.11
			58.191			12.29
1901.	**No. 1973.**					
June 6		11	26.238	−28	49	41.32
25			.121			[39.65]
			26.179			41.32
1901.	**No. 1974.**					
June 10		11	41.167	−27	39	42.97
12			.214			44.24
			41.190			43.60
1901.	**No. 1975.**					
July 17		11	58.291	−24	10	45.25
26			.336			45.16
			58.313			45.20
1902.	**q.**					
June 13		12	7.977	−23	57	53.85
16			.989			53.46
			7.981			53.66

No. 1976.

1901.	h	m	s	°	′	″
June 27	17	12	37.108	−16	12	20.03
28			.105			20.15
			37.106			20.09

No. 1977.

1901.						
July 2		12	56.331	−22	36	7.85
5			.281			7.38
			56.306			7.61
1902.						
June 23			59.959			11.45
25			.934			11.53
			59.946			11.49

No. 1978.

1901.						
July 8		13	41.095	−18	51	0.88
9			.179			1.34
			41.137			1.11

No. 1979.

1901.						
June 3		14	10.305	−29	15	44.20
4			.319			42.88
			10.312			43.54

No. 1980. ξ Oph.

1901.						
June 6		15	4.152	−21	0	24.25
25			.185			24.93
			4.168			24.59
Mean φ (2)				37	20	26.76
1902.						
June 13			7.828			27.95
16			.790			28.31
			7.809			28.13

No. 1981. θ Oph.

1901.						
June 10		15	55.707	−24	54	2.80
12			.674			3.29
27			.719			3.37
28			.702			3.32
			55.700			3.19
Mean φ (4)				37	20	26.41

No. 1982.

1902.						
June 17		16	14.248	−26	6	59.23
26			.184			59.90
			14.216			59.56

No. 1983.

1901.						
July 2		16	37.802	−17	14	35.30
5			.700			35.26
			37.751			35.28

No. 1984.

1901.	h	m	s	°	′	″
July 16	17	17	4.501	−20	7	10.10
18			.512			9.38
			4.506			9.74

No. 1985.

1901.						
July 8		17	7.696	−28	2	48.56
9			.685			48.28
			7.690			48.42

No. 1986.

1901.						
July 11		17	13.641	−22	54	50.39
12			.651			49.63
			13.646			50.01
1902.						
June 23			17.277			53.91
25			.295			53.69
			17.286			53.80

No. 1987.

1901.						
June 3		17	54.377	−15	56	37.70
4			.433			38.19
			54.405			37.94

No. 1988.

1901.						
June 6		18	46.673	−21	20	57.55
25			.736			58.19
			46.704			57.87
1902.						
June 13			50.306		21	1.16
16			.347			0 96
			50.326			1.06

No. 1989.

1901.						
June 10		18	49.239	−18	21	13.64
12			.238			14.16
			49.238			13.90

No. 1990.

1901.						
June 17		19	53.491	−27	30	35.44
26			.442			35.16
			53.467			35.30

No. 1991.

1901.						
June 27		20	19.359	−24	5	4.02
28			.377			3.95
			19.368			3.99
1902.						
June 23			23.104			7.27
25			.094			7.35
			23.099			7.31

No. 1992.

1901.	h	m	s	°	′	″
July 2	17	20	47.563	−25	51	22.68
5			.624			21.90
			47.593			22.29

No. 1993.

1901.						
July 8		21	1.835	−29	46	39.05
9			.953			38.27
			1.894			38.66

No. 1994.

1901.						
June 3		22	10.730	−28	58	30.81
4			.686			31.09
			10.708			30.95

No. 1995.

1901.						
June 6		22	21.835	−20	52	53.24
25			.847			53.48
			21.841			53.36

No. 1996.

1901.						
June 10		22	43.024	−22	29	55.59
12			.034			55.68
			43.029			55.63
1902.						
June 13			46.629			59.29
16			.688			58.61
			46.658			58.95

No. 1997.

1901.						
July 11		23	35.265	−16	30	37.06
12			.250			36.83
			35.257			36.94

No. 1998.

1901.						
June 27		23	53.172	−19	23	36.47
28			.181			37.22
			53.177			36.84

No. 1999. 51 Oph.

1901.						
June 3		25	22.442	−23	53	9.98
4			.402			10.49
6			.468			10.61
17			.541			9.97
25			.476			10.20
July 2			.428			10.94
5			.485			10.47
11			.481			10.83
12			.457			10.43
			22.464			10.44
Mean φ (9)				37	20	26.30

No. 1999. 51 Oph. (*Con.*)

1902.	h	m	s	°	′	″
June 23	17	25	26.129	−23	53	13.37
25			.165			12.83
			26.147			13.10
1901.			**No. 2000.**			
July 8		25	35.514	−26	11	38.73
9			.463			38.51
			35.488			38.62
1901.			**No. 2001.**			
June 10		25	42.380	−28	2	35.98
26			.384			36.35
			42.382			36.16
1901.			**Anon.**			
June 12		25	52.737	−28	2	27.56
1901.			**No. 2002.**			
July 16		26	44.516	−29	34	43.61
18			.538			43.26
			44.527			43.43
1901.			**No. 2003.**			
July 27		27	13.439	−17	25	29.34
28			.433			29.01
			13.436			29.17
1901.			**No. 2004.**			
July 2		27	31.882	−20	42	25.42
5			.811			24.93
			31.846			25.18
1901.			**No. 2005.**			
July 8		29	21.096	−21	58	38.31
9			.130			38.42
			21.113			38.37
1902.						
June 13			24.741			40.99
16			.731			40.91
			24.736			40.95
1901.			**No. 2006.**			
June 3		29	30.164	−24	33	37.33
4			.046			37.00
			30.105			37.16
1902.						
June 23			33.797			39.89
25			.829			39.74
			33.813			39.81

No. 2007.

1901.	h	m	s	°	′	″
June 6	17	31	12.818	−18	55	41.54
25			.868			42.53
			12.843			42.04
1901.			**No. 2008.**			
June 10		31	36.908	−20	37	40.45
12			.956			40.75
			36.932			40.60
1902.			*α*.			
June 13		31	49.532	−23	19	42.78
16			.574			42.90
			49.553			42.84
1901.			**No. 2009. ξ Scorp.**			
June 17		31	55.034	−15	20	10.86
26			.027			11.40
27			.048			11.68
28			.104			11.49
July 19			.034			10.48
22			54.977			10.57
24			.021			11.14
26			.002			10.79
			55.031			11.05
Mean φ (8)				37	20	26.96
1901.			**No. 2010.**			
July 16		31	55.323	−15	30	37.89
18			.359			37.70
			55.341			37.80
1901.			**No. 2011.**			
July 2		32	45.810	−28	21	9.90
5			.768			8.97
			45.789			9.43
1901.			**No. 2012.**			
July 8		32	47.907	−21	51	15.47
9			.886			14.43
			47.896			14.95
1902.						
June 23			51.453			17.17
25			.486			18.18
			51.470			17.68
1901.			**No. 2013.**			
July 11		32	54.925	−26	52	41.08
12			.959			40.41
			54.942			40.74

No. 2014.

1901.	h	m	s	°	′	″
June 3	17	33	1.666	−29	28	23.50
4			.636			23.64
			1.651			23 57
1901.			**No. 2015.**			
June 6		33	19.725	−17	23	21.25
25			.768			21.96
			19 746			21.60
1901.			**No. 2016.**			
June 10		34	27.486	−25	34	11.55
12			.489			12.17
			27.488			11.86
1901.			**No. 2017.**			
June 17		34	47.467	−23	46	58.50
26			.484			58.62
			47.476			58.56
1902.						
June 13			51.144		47	0.02
16			.124			0.88
			51.134			0.45
1901.			**No. 2018.**			
June 27		35	27.213	−19	24	16.11
28			.218			15.88
			27.216			16.00
1901.			**No. 2019.**			
July 2		35	54.349	−26	47	40 77
5			.328			39.40
			54.338			40.08
1901.			**No. 2020.**			
July 8		37	9.210	−30	7	45.81
9			.192			45.12
			9.201			45.46
1901.			**No. 2021. 58 Oph.**			
June 3		37	29.752	−21	38	6.65
4			.791			6.41
10			.787			6.44
12			.802			6.43
July 16			.832			6.86
18			.845			5.88
			29.801			6.44
Mean φ (6)				37	20	26.62
1902.						
June 23			33 400	−21	38	8.49
25			.454			8.40
			33.427			8.44

No. 2022.

1901.	h	m	s	°	′	″
June 6	17	38	22.423	−17	41	53.71
25			.418			54.30
			22.421			54.00

No. 2023.

1901.						
July 11		38	35.466	−16	49	8.01
12			.480			7.31
			35.473			7.66
1902.			π			
June 13		38	53.061	−24	38	27.17
16			.073			26.75
			53.067			26.96

No. 2024.

1901.						
June 17		39	4.871	−22	50	44 80
26			.794			45.42
			4.833			45.11
1902.						
June 23			8.506			46.78
25			.507			46.37
			8.506			46.57

No. 2025.

1901.						
June 27		39	47.601	−20	9	44.65
28			.528			44.93
			47.564			44.79

No. 2026.

1901.						
July 2		40	35.153	−25	42	55.68
5			.108			55.17
			35.131			55.42

No. 2027. X Sagit.

1901.						
July 8		41	19.703	−27	47	35.67
9			.676			35.26
			19.690			35.46
Mean φ (2)				37	20	26.14

No. 2028.

1901.						
June 3		41	39.605	−18	4	11.25
4			.630			11.57
			39.617			11.41

No. 2029.

1901.						
June 6		42	54.522	−30	33	46.92
25			.564			48.00
			54.543			47.46

No. 2030.

1901.	h	m	s	°	′	″
June 10	17	43	9.632	−29	16	53.08
12			.626			53 68
			9.629			53.38

No 2031.

1901.						
June 17		43	43.297	−19	58	26.43
26			.234			26.91
			43.266			26.67

No. 2032.

1901.						
June 27		43	54.499	−26	46	45.40
28			.492			46.39
			54.496			45.90

No. 2033.

1901.						
July 2		43	54.166	−24	10	29.59
5			.182			28.97
			54.174			29.28
1902.						
June 13			57.844			30.63
16			.888			30.60
			57.866			30.62

No. 2034.

1901.						
July 8		44	41.709	−21	54	4.67
9			.667			3.97
			41.688			4.32
1902.						
June 23			45.319			5.56
25			.287			5.20
			45.303			5.38

No. 2035.

1901.						
July 11		45	7.268	−22	53	25.26
12			.202			24.75
			7.235			25.01
1902.						
July 2			10.877			26 61
7			.916			27.09
			10.897			26.85

No. 2036.

1901.						
June 3		45	36.455	−28	35	41.81
4			.438			41.90
			36.446			41.85

No. 2037.

1901.						
July 16		45	46.947	−25	44	44.91
18			.971			45.39
			46.959			45.15

No. 2038.

1901.	h	m	s	°	′	″
June 6	17	45	54.425	−21	1	55.07
25			.439			55.17
			54.432			55.12

No. 2039.

1901.						
June 10		46	29.284	−19	5	43.95
12			.314			43.41
			29.299			43.68

No. 2040.

1901.						
June 17		46	35.198	−16	56	34.22
26			.257			33.98
			35.228			34.10

No. 2041.

1901.						
June 27		47	21.583	−27	15	34.95
28			.642			35.88
			21.613			35.41

No. 2042.

1901.						
July 2		48	13.162	−17	23	27.00
5			1.48			26.85
			13.155			26.93

No. 2043.

1901.						
July 8		48	48.399	−24	52	3.48
9			.435			3.24
			48.417			3.36
1902.						
June 13			52.113			3.11
16			.134			3.92
			52.124			3.52

No. 2044.

1901.						
June 3		50	5.504	−18	47	4.87
4			.520			5.00
			5.512			4.93

No. 2045.

1901.						
June 6		50	13.487	−26	45	18.00
25			.520			19.14
			13.503			18.57

No. 2046.

1901.						
June 10		50	23.730	−21	56	20.69
12			.753			20.85
			23.741			20.77
1902.						
June 23			27.422			21.48
25			.367			21.94
			27.394			21.71

No. 2047.

1901.						
June 17		50	26.804	−28	2	57.28
26			.735			58.02
			26.770			57.65

		h	m	s	°	′	″
	No. 2048.						
1901.							
June 27		17	50	28.137	−23	22	27.62
28				.158			27.63
				28.147			27.63
1902.							
July 2				31.758			27.97
7				.810			28.41
				31.784			28.19
1901.	**No. 2049.**						
July 2			51	20.964	−20	11	3.15
5				.969			3.12
				20.966			3.13
1901.	**No. 2050.**						
July 16			52	22.188	−28	44	53.06
18				.224			53.66
				22.206			53.36
1901.	**No. 2051. 4 Sagit.**						
July 8			53	44.876	−23	48	25.90
9				.853			26.01
11				.879			25.81
12				.840			26.39
				44.862			26.03
Mean φ (4)					37	20	26.25
1902.							
June 13				48.542			26.01
16				.487			26.25
				48.514			26.13
1901.	**No. 2052.**						
June 3			53	53.780	−25	4	44.19
4				.770			44.66
				53.775			44.43
1902.							
June 23				57.540			45.64
25				.503			45.63
				57.521			45.64
1901.	**No. 2053.**						
June 6			53	54.882	−29	53	7.44
25				.841			8.49
				54.861			7.97
1901.	**No. 2054.**						
June 10			54	6.685	−20	19	54.51
12				.711			55.03
				6.698			54.77

		h	m	s	°	′	″
	No. 2055.						
1901.							
June 17		17	55	37.951	−17	9	10.90
26				.963			11.43
				37.957			11.17
1901.	**No. 2056.**						
June 27			55	54.458	−22	46	39.54
28				.513			40.10
				54.486			39.82
1902.							
July 2				58.064			39.90
7				.075			40.01
				58.070			39.96
1901.	**No. 2057.**						
July 2			56	2.098	−19	6	13.43
5				.170			13.38
				2.134			13.40
1901.	**No. 2058.**						
July 16			56	40.129	−27	49	33.94
18				.143			33.81
				40.136			33.88
1901.	**No. 2059.**						
July 11			56	42.919	−20	44	12.17
12				.870			11.91
				42.894			12.04
1901.	**No. 2060.**						
July 8			56	42.729	−21	30	28.71
9				.744			28.73
				42.737			28.72
1901.	**No. 2061.**						
June 6			56	47.066	−24	16	54.03
25				.064			53.66
				47.065			53.85
1901.	**No. 2062.**						
June 3			56	56.159	−17	31	19.01
4				.094			19.00
				56.126			19.00
1901.	**No. 2063.**						
June 10			57	13.935	−26	19	12.57
12				.981			12.23
				13.958			12.40

		h	m	s	°	′	″
	No. 2064.						
1901.							
June 17		17	57	48.182	−24	21	45.50
26				.271			45.94
				48.226			45.72
1901.	**No. 2065.**						
July 16			58	41.801	−29	35	3.88
18				.834			3.99
29				.786			4.89
				41.807			4.25
1901.	**No. 2066.**						
June 27			59	6.219	−24	24	13.22
28				.225			13.30
				6.222			13.26
1902.							
June 13				9.914			13.41
16				.947			13.31
				9.930			13.36
1901.	**γ Sagit.**						
July 2			59	26.864	−30	25	32.50
5				.861			31.74
18				.872			31.08
22				.876			32.45
				26.868			31.94
Mean φ (4)					37	20	27.04
1901.	**No. 2067.**						
July 24		18	0	52.877	−18	59	35.50
26				.910			35.40
				52.893			35.45
1901.	**No. 2068.**						
July 8			1	15.055	−21	27	14.92
9				.048			15.28
				15.051			15.10
1902.							
June 23				18.669			14.93
25				.692			14.92
				18.680			14.92
1901.	**No. 2069.**						
July 11			1	44.666	−23	6	59.17
12				.688			58.92
				44.677			59.04
1902.							
June 13				48.365			58.34
16				.343			58.01
				48.354			58.18

No. 2070.

1901.	h	m	s	°	′	″
July 16	18	1	48.796	−28	28	5.57
18			.781			5.60
			48.788			5.59

No. 2071.

1901.						
July 19		2	3.874	−17	10	2.91
22			.867			3.39
			3.870			3.15

No. 2072.

1901.						
June 27		2	40.074	−27	47	52.49
28			.087			52.31
			40.080			52.40

No. 2073.

1901.						
July 2		2	48.833	−20	6	3.29
5			.895			3.58
			48.864			3.43

No. 2074.

1901.						
July 24		3	6.149	−26	7	20.73
26			.126			20.40
			6.138			20.56

No. 2075.

1901.						
June 17		3	36.354	−24	43	51.16
26			.358			51.54
			36.356			51.35

No. 2076.

1901.						
July 8		4	45.760	−22	15	30.10
9			.773			30.27
			45.766			30.19

No. 2077.

1901.						
July 11		5	14.020	−18	33	59.70
12			.034			59.26
			14.027			59.48

No. 2078.

1901.						
July 16		5	22.748	−19	51	41.37
18			.733			40.89
			22.740			41.13

No. 2079.

1901.						
June 27		5	40.694	−28	55	21.64
28			.708			21.84
			40.701			21.74

No. 2080.

1901.	h	m	s	°	′	″
July 19	18	5	40.836	−23	43	16.60
22			.860			17.33
			40.848			16.97
1902.						
June 23			44.485			16.49
25			.510			16.12
			44.498			16.30

No. 2081.

1901.						
July 2		6	3.479	−20	26	42.33
5			.536			41.93
			3.507			42.13

No. 2082. *μ* **Sagit.**

1901.						
July 8		7	50.553	−21	5	5.17
9			.550			5.34
			50.551			5.26
Mean φ (2)				37	20	25.93
1902.						
June 13			54.217			4.76
16			.106			4.83
23			.201			4.16
25			.213			4.65
July 2			.103			4.77
7			.152			4.73
17			.108			4.31
18			.122			4.26
			54.153			4.56
Mean φ (8)				37	20	26.43

No. 2083.

1901.						
July 24		7	57.696	−27	31	43.40
26			.614			43.10
			57.655			43.25

No. 2084.

1901.						
July 11		8	19.031	−21	44	22.73
12			.035			22.34
			19.033			22.54

No. 2085.

1901.						
June 27		8	45.034	−29	51	3.84
28			.038			4.40
			45.036			4.12

No. 2086.

1901.						
July 2		9	3.390	−25	49	6.26
5			.417			6.15
			3.403			6.20

No. 2087.

1901.	h	m	s	°	′	″
July 16	18	9	18.558	−20	45	27.88
18			.535			27.81
			18.546			27.84

No. 2088.

1901.						
July 19		9	19.480	−20	25	2.48
22			.469			2.41
			19.474			2.44

No. 2089.

1901.						
June 17		9	41.741	−18	41	30.57
26			.823			31.04
			41.782			30.81

No. 2090.

1901.						
July 24		10	31.250	−23	56	1.71
26			.256			1.49
			31.253			1.60

No. 2091.

1901.						
July 8		11	26.004	−17	24	28.51
9			25.946			29.12
			25.975			28.82

No. 2092.

1901.						
June 27		11	51.401	−27	4	43.03
28			.424			42.60
			51.413			42.82

No. 2093.

1901.						
July 11		11	58.282	−22	22	44.51
12			.323			44.22
			58.303			44.37

No. 2094. *δ* **Sagit.**

1901.						
June 26		14	39.356	−29	52	14.03
July 2			.383			13.34
5			.331			13.33
16			.339			13.39
18			.308			13.18
29			.403			13.38
Aug. 2			.364			13.11
6			.352			13.62
			39.354			13.42
Mean φ (8)				37	20	26.72

No. 2094. δ **Sagit.** (*Con.*)

1902.	h	m	s	°	′	″
June 13	18	14	43.174	−29	52	11.62
16			.195			11.88
23			.213			12.20
25			.219			11.70
July 2			.218			11.38
7			.202			11.19
			43.204			11.66
Mean φ (6)				37	20	26.52

1901. **No. 2095.**

June 27		15	3.500	−26	7	45.00
28			.473			44.40
			3.486			44.70

1903. **No. 2096.**

July 24		15	25 677	−24	57	34.87
26			.702			34.89
			25.690			34.88

1901. **No. 2097.**

July 11		15	33.516	−18	54	15.12
12			.537			14.25
			33.526			14.68

1901. **No. 2098.**

July 8		15	44.257	−28	28	31.08
9			.294			30.71
			44.276			30.90

1901. **No. 2099.**

July 19		16	2.871	−22	58	1.85
22			.847			2.19
			2.859			2.02

1901. **No. 2100.**

July 16		17	25.841	−20	42	9.40
18			.894			9 11
			25.867			9.26

1901. **No. 2101.**

July 2		17	38.148	−21	42	48.50
5			.215			48.23
			38.181			48.36

1901. **No. 2102.**

June 27		19	0.706	−24	28	3.28
28			.653			2.81
			0.680			3.04

No. 2103.

1901.	h	m	s	°	′	″
July 8	18	19	32.219	−27	29	43.21
9			.231			42.78
			32.225			43.00

1901. **No. 2104.**

July 2		21	29.668	−29	52	35.90
5			.634			35.24
			29 651			35.57

1901. **No. 2105.** λ **Sagit.**

June 27		21	51.676	−25	28	36.27
28			.680			36.08
July 24			.642			35.49
26			.646			35.35
			51.661			35.80
Mean φ (4)				37	20	26.28
1902.						
June 13			55.344			34.06
16			.381			34.44
23			.364			34.16
25			.381			33.96
July 2			.337			34 16
7			.351			33.93
17			.334			33.86
18			.336			33.87
			55.354			34.05
Mean φ (8)				37	20	26.72

1901. **No. 2106.**

July 11		21	55.503	−26	48	58.73
12			.554			58.42
			55.529			58.57

1901. **No. 2107.**

July 16		22	6.852	−23	3	37.96
18			.896			37.99
			6.874			37.97

1901. **No. 2108.**

July 19		22	9 883	−17	51	37.39
22			.830			37.77
			9.856			37.58

1901. **No. 2109.**

July 8		23	56.502	−21	0	58.26
9			.535			58.33
			56.519			58.30

No. 2110.

1901.	h	m	s	°	′	″
July 16	18	24	14.493	−28	51	38.03
18			.495			37.91
			14.494			37.97

1901. **No. 2111.**

July 2		24	22.697	−18	47	30.08
5			.668			30.38
			22.682			30.23

1901. **No. 2112.**

July 11		24	38.160	−21	49	8.42
12			.189			7.91
			38.174			8.16

1901. **No. 2113.**

July 24		24	40.463	−20	21	11.14
26			.477			11.27
			40.470			11.20

1901. **No. 2114. M. 750.**

July 19		25	38.224	−18	28	14.58
22			.253			14.54
			38.238			14.56
Mean φ (2)				37	20	27.04

1901. **No. 2115.**

June 27		27	38.326	−25	31	18.74
28			.344			19.20
			38.335			18.97

1901. **No. 2116.**

July 2		27	50.628	−24	6	22.24
5			.645			22.36
			50.637			22.30
1902.						
July 2			54.223			20.71
7			.292			20.06
			54.258			20.38

1901. **No. 2117.**

July 8		27	53.509	−30	57	26.58
9			.563			26.30
			53.536			26.44

1901. **No. 2118.**

July 11		29	21.627	−27	25	[1.80]
12			.615			10.74
29			.679			10.61
			21.640			10.67

	h	m	s	°	′	″
No. 2119.						
1901.						
July 16	18	29	22.948	-22	10	6.32
18			.945			.612
			22.946			6.22
1902.						
July 17			26.433			4.03
18			.515			3.70
			26.474			3.86
1901. **No. 2120.**						
July 19		29	26.863	-20	55	4.43
22			.822			4.29
			26.842			4.36
1901. **No. 2121.**						
July 24		29	33.227	-19	20	45.11
26			.240			45.17
			33.234			45.14
1901. **No. 2122.**						
June 27		29	40.537	-29	46	39.21
28			.493			39.15
			40.515			39.18
1901. **No. 2123.**						
July 2		30	47.684	-28	35	26.15
5			.732			26.67
			47.708			26 41
1901. **No. 2124.**						
July 8		31	4.281	-25	44	43.99
9			.309			43.57
			4.295			43 78
1901. **No. 2125.**						
July 11		31	58.760	-21	28	47.01
12			.824			46.43
			58.792			46.72
1902.						
July 2		32	2.302			44.19
7			.374			44.30
			2.338			44.24
1901. **No. 2126.**						
July 16		32	6.608	-17	18	53.78
18			.596			54.05
			6.602			53.92

	h	m	s	°	′	″
No. 2127.						
1901.						
July 19	18	32	29.404	-23	35	21.74
22			.438			22.27
			29.421			22.00
1902.						
July 17			33.078			19.10
18			.070			19.37
			33.074			19 24
1901. **No. 2128.**						
July 24		32	59.209	-21	8	1.20
26			.217			1.72
			59.213			1 46
1901. **No. 2129.**						
June 27		34	1.288	-20	9	32.45
28			.314			32.02
			1.301			32.23
1901. **No. 2130.**						
July 2		34	56.156	-26	49	55.59
5			.201			55.70
			56.178			55.64
1901. **No. 2131.**						
July 8		35	10.473	-28	2	57.45
9			.507			57.66
			10 490			57.56
1901. **No. 2132.**						
July 11		35	49.488	-18	4	49.64
12			.504			49.54
			49.496			49.59
1901. **No. 2133. 26 Sagit.**						
July 16		35	49.366	-23	55	32.87
18			.369			32.72
Aug. 7			.329			32.63
8			.348			32.39
12			.370			32.09
13			.363			32.21
14			.366			32.71
15			.413			32.41
19			.336			31.92
20			.360			32.96
			49.362			32.49
Mean φ (10)				37	20	26.42
1902.						
July 2			52.955			29.82
7			.957			29.60
			52.956			29.71

	h	m	s	°	′	″
No. 2134.						
1901.						
July 19	18	37	5.157	-19	22	44.24
22			.084			44.26
			5.120			44.25
1901. **No. 2135.**						
July 24		37	22.081	-22	30	26.00
26			.068			26.23
			22.075			26.11
1902.						
July 17			25.692			22.41
18			.691			22.64
			25 692			22.52
1901. **No, 2136.**						
June 27		37	38.511	-21	0	58.37
28			.451			57.90
			38.481			58.14
1901. **No. 2137.**						
July 2		38	44.389	-25	6	36.63
5			.407			37.49
			44.398			37.06
1902.						
July 2			48.153			33.31
7			.124			34.02
			48.139			33 66
1901. **No. 2138. φ Sagit.**						
July 8		39	28.263	-27	5	33.77
9			.267			33.53
11			.281			33.28
12			.315			33.32
			28.282			33.47
Mean φ (4)				37	20	26.47
1901. **No. 2139.**						
July 16		39	51.569	-17	38	47.93
18			.556			48.04
			51.562			47.99
1901. **No. 2140.**						
July 24		40	22.391	-22	29	45.29
26			.386			45.30
			22 388			45.29
1902.						
July 17			26.040			41.47
18			25.983			42.08
			26.012			41.77

	No. 2141.					
1901.	h	m	s	°	′	″
July 19	18	40	29.088	−29	44	6.55
22			.140			7.16
			29.114			6.86
1901.	**No. 2142.**					
June 27		41	22.798	−28	23	9.94
28			.794			10.21
			22.796			10.07
1901.	**No. 2143.**					
July 2		41	55.204	−23	21	52.67
5			.225			52.84
			55.214			52.76
1902.						
July 2			58.858			49.43
7			.962			49.74
			58.910			49.59
1901.	**No. 2144.**					
July 8		42	2.635	−21	4	14.31
9			.667			14.04
			2.651			14.18
1901.	**No. 2145.**					
July 11		42	57.296	−18	42	38.67
12			.277			38.53
			57.286			38.60
1901.	**No. 2146.**					
July 16		43	33.240	−25	43	29.02
18			.190			28.84
			33.215			28.93
1901.	**No. 2147.**					
July 19		43	47.637	−20	26	13.87
22			.621			13.71
			47.629			13.79
1901.	**No. 2148.**					
June 27		44	27.745	−26	53	1.53
28			.731			1.38
			27.738			1.46
1901.	**No. 2149. 30 Sagit.**					
July 2		44	53.409	−22	16	32.08
5			.438			31.87
24			.413			31.72
26			.410			31.59
			53.417			31.81
Mean φ (4)				37	20	26.60

	No. 2149. 30 Sagit. (*Con.*)					
1902.	h	m	s	°	′	″
July 2	18	44	57.081	−22	16	28.13
7			56.987			28.47
			57.034			28.30
Mean φ (2)				37	20	27.16
1901.	**No. 2150.**					
July 8		45	35.448	−17	16	11.50
9			.474			11.97
			35.461			11.73
1901.	**No. 2151.**					
July 11		45	47.957	−24	46	14.26
12			.982			13.96
			47.970			14.11
1902.						
July 17			51.607			9.94
18			.643			10.37
			51.625			10.15
1901.	**No. 2152.**					
July 16		46	19.811	−29	29	47.75
18			.790			47.57
			19.800			47.66
1901.	**No. 2153.**					
July 19		46	55.160	−27	52	35.11
22			.201			35.36
			55.181			35.24
1901.	**No. 2154.**					
July 24		47	18.480	−18	45	20.62
26			.512			21.23
			18.496			20.93
1901.	**No. 2155.**					
June 27		48	5.154	−21	28	53.24
28			.120			52.42
			5.137			52.83
1901.	**No. 2156.**					
July 2		48	11.583	−22	52	0.97
5			.594			0.50
			11.589			0.73
1902.						
July 2			15.205		51	55.99
7			.251			56.21
			15.228			56.10

	No. 2157. σ Sagit.					
1901.	h	m	s	°	′	″
July 11	18	49	7.621	−26	25	11.48
12			.609			11.65
			7.615			11.56
Mean φ (2)				37	20	26.68
1901.	**No. 2158.**					
July 16		49	8.038	−22	47	42.72
18			.071			42.06
			8.054			42.39
1901.	**No. 2159.**					
July 8		50	1.050	−23	17	59.79
9			.014			59.16
			1.032			59.47
1901.	**No. 2160.**					
July 19		50	2.168	−16	28	26.88
22			.125			26.30
			2.146			26.59
1901.	**No. 2161.**					
July 24		50	39.616	−24	44	54.10
26			.615			53.77
			39.615			53.93
1902.	**p.**					
July 17		51	11.569	−23	59	45.93
18			.746			45.71
			11.657			45.82
1901.	**No. 2162.**					
June 27		51	27.513	−20	47	10.06
28			.527			9.58
			27.520			9.82
1901.	**No. 2163.**					
July 2		51	46.529	−19	17	0.32
5			.590			0.11
			46.560			0.22
1901.	**No. 2164.**					
July 8		51	49.449	−21	14	12.67
9			.419			12.38
			49.434			12.52
1902.						
July 2			52.987			7.81
7			53.065			7.89
			53.026			7.85
1901.	**No. 2165.**					
July 11		53	39.206	−18	42	1.44
12			.172			1.67
			39.189			1.56

No. 2166.

1901.	h	m	s	°	′	″
July 16	18	53	47.190	−28	11	8.26
18			.212			9.11
			47.201			8.68
1901.			**No. 2167.**			
July 19		54	8.298	−26	19	6.23
22			.286			6.94
			8.292			6.58
1901.			**No. 2168.**			
June 27		54	40.558	−17	37	16.47
28			.490			16.69
			40.524			16.58
1901.			**No. 2169.**			
July 2		55	39.669	−22	50	5.44
5			.699			6.27
			39.684			5.85
1902.						
July 2			43.320			1.53
7			.341			1.34
			43.330			1.44
1901.			**No. 2170.**			
July 8		56	24.120	−24	59	1.04
9			.101			0.98
			24.110			1.01
1901.			**No. 2171.**			
July 11		57	14.722	−19	23	18.03
12			.694			18.11
			14.708			18.07
1901.			**No. 2172.**			
June 27		57	41.893	−20	16	21.72
28			.820			21.49
			41.856			21.60
1901.			**No. 2173.**			
July 16		57	46.369	−24	4	38.07
18			.390			38.09
			46.380			38.08
1901.			**No. 2174.**			
July 24		58	45.025	−21	53	11.84
26			.048			12.13
			45 037			11.98

No. 2174. (*Con.*)

1902.	h	m	s	°	′	″
July 17	18	58	48.574	−21	53	7.01
18			.691			6.88
			48.633			6.94
1901.			**No. 2175.**			
July 2		59	4.312	−26	17	11.38
5			.374			11.01
			4.343			11.19
1901.			**No. 2176. τ Sagit.**			
June 27	19	0	45.519	−27	48	54.85
28			.572			55.16
July 8			.612			55.17
9			.629			55.17
11			.535			55.16
12			.577			54.59
16			.615			54.24
18			.579			54.98
29			.542			54.72
Aug. 14			.555			[53.59]
15			.582			54.69
19			.560			54.71
20			.592			54.66
			45.575			54.84
Mean φ (12)				37	20	26.24
1901.			**No. 2177.**			
July 19	1		10.561	−16	22	50.71
22			.573			51.06
			10.567			50.89
1901.			**No. 2178.**			
Aug. 2		1	16.835	−28	47	21.51
6			.877			21.37
			16.856			21.44
1901.			**No. 2179.**			
Aug. 7		1	20.704	−18	53	24.99
8			.670			24.50
			20.687			24.74
1901.			**No. 2180.**			
Aug. 12		1	34.561	−17	23	40.07
13			.543			40.48
			34.552			40.27
1901.			**No. 2181.**			
July 24		2	11.686	−24	48	43.59
26			.682			42.78
			11.684			43.18

No. 2182.

1901.	h	m	s	°	′	″
Aug. 14	19	2	27.706	−19	26	43.28
15			.716			42.68
			27.711			42.98
1901.			**No. 2183.**			
Aug. 19		2	45.530	−23	20	44.79
20			.538			45.71
			45.534			45.25
1902.						
July 2			49.183			39.83
7			.234			39.74
			49.209			39.79
1901.			**No. 2184.**			
July 16		3	34.210	−22	32	6.87
18			.212			7.35
			34.211			7.11
1902.						
July 17			37.760			1.24
18			.780			1.45
			37.770			1.34
1901.			**No. 2185. π Sagit.**			
July 8		3	52.598	−21	10	52.25
9			.600			51.85
Aug. 7			.629			52.26
8			.610			51.85
			52.609			52.05
Mean φ (4)				37	20	26.32
1902.						
July 2			56.160			46.49
7			.217			46.87
			56.189			46.68
Mean φ (2)				37	20	26.80
1901.			**No. 2186.**			
Aug. 12		3	57.792	−19	57	35.71
13			.806			35.16
			57.799			35.43
1901.			**No. 2187.**			
July 19		4	58.620	−28	41	43.46
22			.629			43.49
			58.624			43.48
1901.			**No. 2188.**			
July 16		7	7.896	−26	4	21.83
29			.851			22.22
			7.874			22.03

Anon.

1901.	h	m	s	°	′	″
July 18	19	7	16.310	−25	42	0.83

No. 2189.

1901.						
July 19		7	48.059	−27	2	29.17
22			.062			30.16
			48.060			29.66

No. 2190.

1901.						
July 24		8	13.205	−22	13	43.96
26			.121			43.69
			13.163			43.82
1902.						
July 2			16.802			37.96
7			.809			38.24
			16.805			38.10

No. 2191.

1901.						
Aug. 2		9	6.808	−17	31	0.54
6			.735			0.56
			6.771			0.55

No. 2192. ψ Sagit.

1901.						
Aug. 12		9	28.206	−25	25	38.41
13			.201			38.43
			28.204			38.42
Mean φ (2)				37	20	26.10
1902.						
July 17			31.929			32.80
18			.946			33.16
			31.938			32.98
Mean φ (2)				37	20	26.96

No. 2193.

1901.						
Aug. 7		9	31.373	−24	20	53.70
8			.393			53.77
			31.383			53.74

No. 2194.

1901.						
Aug. 14		9	36.430	−19	57	28.97
15			.483			27.72
			36.456			28.34

No. 2195.

1901.						
Aug. 19		9	45.278	−16	16	11.85
20			.284			12.47
			45.281			12.16

No. 2196.

1901.						
July 16		10	35.505	−28	50	28.27
18			.508			28.19
			35.507			28.23

No. 2197. d Sagit.

1901.	h	m	s	°	′	″
July 19	19	11	50.580	−19	7	45.24
22			.568			44.74
24			.573			45.21
26			.597			44.67
29			.572			45.06
Aug. 2			.580			44.96
6			.635			45.27
			50.587			45.02
Mean φ (7)				37	20	26.36
1902.						
July 2			54.098			38.99
7			.078			39.44
17			.137			38.92
18			.109			38.63
			54.106			39.00
Mean φ (4)				37	20	26.73

No. 2198.

1901.						
Aug. 14		12	20.227	−27	59	14.67
15			.206			14.12
			20.216			14.39

No. 2199.

1901.						
Aug. 19		13	18.391	−23	44	16.45
20			.380			16.03
			18.385			16.24

No. 2200.

1901.						
Aug. 7		13	21.497	−15	42	31.33
8			.375			31.07
			21.436			31.20

No. 2201.

1901.						
Aug. 12		13	23.939	−21	4	19 41
13			24.009			19.66
			23.974			19.53

No. 2202.

1901.						
July 16		14	40.454	−24	23	23.76
18			.414			24.40
			40.434			24.08

No. 2203.

1901.						
July 19		14	42.184	−22	35	12.06
22			.154			12.24
			42.169			12.15

No. 2204.

1901.						
July 24		15	38.581	−26	21	3.80
26			.506			3.35
			38.544			3.58

No. 2205.

1901.	h	m	s	°	′	″
Aug. 14	19	15	49.069	−19	25	10.87
15			.080			10.30
			49.074			10.58

No. 2206.

1901.						
Aug. 19		15	55.879	−18	2	1.13
20			.880			0.70
			55.880			0.91

No. 2207.

1901.						
Aug. 2		16	3.431	−16	8	26.60
6			.503			26.18
			3.467			26.39

No. 2208.

1901.						
Aug. 7		16	4.448	−18	29	32.05
8			.433			31.91
			4.440			31.98

No. 2209.

1901.						
Aug. 12		16	48.861	−20	49	40.79
13			.880			41.19
			48.871			40.99

No. 2210.

1901.						
July 16		18	19.973	−28	3	26.16
18			.937			26.72
			19.955			26.44

No. 2211.

1901.						
July 19		19	15.069	−24	42	2.99
22			.082			3 40
			15.076			3.20

No. 2212.

1901.						
July 24		19	30.265	−24	9	23.10
26			.190			22.39
			30.227			22.75

No. 2213.

1901.						
Aug. 2		20	24.867	−21	58	22.39
6			.937			21.51
			24.902			21.95

No. 2214.

1901.						
Aug. 7		20	40.814	−25	46	46.58
8			.746			47.16
			40.780			46.87

No. 2215.

1901.	h	m	s	°	′	″
Aug. 12	19	21	4.366	- 16	58	49.64
13			.454			50.53
			4.410			50.08

No. 2216.

1901.	m	s	°	′	″
July 16	22	15.135	- 20	42	56.40
18		.123			57.22
		15.129			56.81

No. 2217.

1901.	m	s	°	′	″
July 19	22	15.506	- 19	32	33.69
22		.499			34.02
		15.503			33.85

No. 2218.

1901.	m	s	°	′	″
July 24	22	19.802	- 18	33	34.01
26		.725			33.80
		19.763			33.91

No. 2219.

1901.	m	s	°	′	″
Aug. 2	23	44.783	- 27	11	18.88
6		.812			17.95
		44.798			18.41

No. 2220.

1901.	m	s	°	′	″
Aug. 7	24	25.024	- 22	42	3.99
8		.066			4.11
		25.045			4.05

No. 2221.

1901.	m	s	°	′	″
Aug. 12	24	55.624	- 24	9	28.04
13		.617			28.21
		55.620			28.13

No. 2222.

1901.	m	s	°	′	″
Aug. 14	25	1.537	- 21	31	5.44
15		.522			5.58
		1.530			5.51

No. 2223.

1901.	m	s	°	′	″
Aug. 19	25	12.971	- 25	56	33.20
20		.942			33 28
		12.956			33.24

No. 2224.

1901.	m	s	°	′	″
July 16	25	41.956	- 17	52	50.13
18		.944			50 48
		41.950			50.30

No. 2225.

1901	h	m	s	°	′	″
July 19	19	25	52 864	28	25	14.91
22			.873			15.76
			52.868			15.34

No. 2226.

1901.	m	s	°	′	″
July 24	25	54.913	- 19	35	40 26
26		.816			39.73
		54 864			40.00

No. 2227.

1901.	m	s	°	′	″
Aug. 2	28	38.576	- 16	35	18.27
6		.580			17.67
		38.578			17.97

No. 2228.

1901.	m	s	°	′	″
July 16	28	51.439	- 22	12	54.98
18		.506			55.29
		51.473			55.14

No. 2229.

1901.	m	s	°	′	″
July 19	29	41.644	- 23	31	33.77
22		.701			34.06
		41.672			33.92

No. 2230.

1901.	m	s	°	′	″
July 24	29	44.353	- 20	59	39.82
26		.350			40.16
		44.351			39.99

No. 2231.

1901.	m	s	°	′	″
Aug. 7	30	0.151	- 26	7	5.99
8		.091			5.70
		0.121			5.84

No. 2232.

1901.	m	s	°	′	″
Aug. 12	30	[0.874]	- 24	56	9.87
13		1.028			10.46
21		1.093			10.39
		1.060			10.24

No. 2233.

1901.	m	s	°	′	″
Aug. 14	30	39.901	- 19	4	17.26
15		.816			16.81
		39.859			17.03

No. 2234. h Sagit.

1901.	m	s	°	′	″
July 29	30	41.041	- 25	6	7.98
Aug. 2		.046			8.50
6		.007			7.85
		41 031			8.11
Mean φ 3)			37	20	26.35

No. 2234. h Sagit. (*Con.*)

1902.	h	m	s	°	′	″
July 2	19	30	44.652	- 25	6	0.06
7			.665			0.29
17			.668			0 76
18			.631			0.66
			44 654			0.44
Mean φ (4)				37	20	26 86

No. 2235.

1901.	m	s	°	′	″
Aug. 19	31	18.711	- 18	27	4.02
20		.717			3 82
		18 714			3.92

No. 2236.

1901.	m	s	°	′	″
July 24	32	45.591	- 28	49	51.18
26		.561			51.20
		45.576			51.19

No. 2237.

1901.	m	s	°	′	″
July 19	32	49.228	- 27	35	41.44
22		.229			41.97
		49.228			41.71

No. 2238.

1901.	m	s	°	′	″
July 16	33	30.946	- 17	8	6.28
18		.902			6.39
		30.924			6.34

No. 2239.

1901.	m	s	°	′	″
Aug. 2	33	52.526	- 23	39	10.57
6		.489			9.73
		52.507			10.15

No. 2240.

1901.	m	s	°	′	″
Aug. 7	34	2.190	- 22	17	19.98
8		.171			20.18
		2.181			20.08

No. 2241.

1901.	m	s	°	′	″
Aug. 12	34	10.080	- 23	39	20.39
13		.114			19.80
		10.097			20.10

No. 2242.

1901.	m	s	°	′	″
Aug. 14	34	14.992	- 15	23	35.81
15		.944			35.94
		14.968			35.87

No. 2243.

1901.	m	s	°	′	″
Aug. 19	34	59.044	- 21	3	59.74
20		.045			59.43
		59 044			59.58

No. 2244.

1901.	h	m	s	°	′	″
July 16	19	35	3.185	-16	31	11.40
18			[3.012]			11.59
29			3.137			12.30
			3.161			11.76

No. 2245.

1901.	h	m	s	°	′	″
July 19		36	19.192	-26	40	31.65
22			.112			32.60
			19.152			32.13

No. 2246.

1901.	h	m	s	°	′	″
July 24		36	22.250	-25	5	25.08
26			.227			25.01
			22.239			25.04

No. 2247.

1901.	h	m	s	°	′	″
Aug. 2		36	[51.289]	-16	21	20.91
6			.417			20.61
21			.420			21.34
			51.418			20.95

No. 2248.

1901.	h	m	s	°	′	″
Aug. 7		37	6.765	-18	25	55.54
8			.695			55 70
			6.730			55.62

No. 2249.

1901.	h	m	s	°	′	″
Aug. 12		37	26.143	-19	20	44.05
13			.191			43.96
			26.167			44.01

No. 2250.

1901.	h	m	s	°	′	″
Aug. 14		37	54.839	-15	41	58.50
15			.813			58.15
			54.826			58.33

No. 2251.

1901.	h	m	s	°	′	″
July 16		38	37.588	-23	5	31.36
18			.508			31.46
			37.548			31.41

No. 2252.

1901.	h	m	s	°	′	″
Aug. 19		40	13.157	-27	30	24.97
20			.128			25.56
			13.143			25.27

No 2253. f Sagit.

1901.	h	m	s	°	′	″
July 19	19	40	35.254	-19	59	56.99
22			.272			56.99
24			.238			56.55
26			.224			56.98
Aug. 21			.306			57.01
			35.259			56.90
Mean φ (5)				37	20	26.45
1902.						
July 2			38.815			48.43
7			.732			48.13
			38.774			48.28
Mean φ (2)				37	20	26.26

b.

1902.	h	m	s	°	′	″
July 17		40	42.146	-21	45	40.04
18			.119			39.47
			42.133			39.76

No. 2254.

1901.	h	m	s	°	′	″
Aug. 2		40	56.382	-26	43	52.34
6			.380			52.15
			56.381			52.24

No. 2255.

1901.	h	m	s	°	′	″
Aug. 7		41	10.474	-23	58	35.87
8			.458			36.33
			10.466			36.10

No. 2256.

1901.	h	m	s	°	′	″
Aug. 12		41	27.758	-17	19	12.82
13			.768			12.59
			27.763			12.70

No. 2257.

1901.	h	m	s	°	′	″
July 16		42	9.466	-18	38	51.26
18			.456			51.62
			9.461			51.44

No. 2258.

1901.	h	m	s	°	′	″
Aug. 14		42	9.938	-21	12	5.65
15			.913			5.65
			9 925			5 65

No. 2259.

1901.	h	m	s	°	′	″
July 19		44	22.036	-23	1	43.77
22			.015			43.33
			22.026			43.55
1902.						
July 2			25.594			34.67
7			.596			34.50
			25.595			34.58

No. 2260.

1901.	h	m	s	°	′	″
July 24	19	44	29.430	-21	53	29.36
26			.407			29.67
			29.419			29.52

No. 2261.

1901.	h	m	s	°	′	″
Aug. 12		44	50.202	-15	40	19.28
13			.281			18.83
			50.242			19.06

No. 2262.

1901.	h	m	s	°	′	″
Aug. 7		45	4.168	-27	43	20.39
8			.157			21.08
			4.162			20.73

No. 2263.

1901.	h	m	s	°	′	″
Aug. 2		45	15.149	-25	8	59.37
6			.163			58.44
			15.156			58.90

No. 2264.

1901.	h	m	s	°	′	″
Aug. 14		46	5.141	-19	56	53.24
15			.080			52.73
			5.110			52.98
1902.						
July 17			8.663			43.44
18			.614			43.86
			8.639			43.65

No. 2265.

1901.	h	m	s	°	′	″
Aug. 19		46	26.845	-19	17	47.64
20			.825			47.27
			26.835			47.46

No. 2266.

1901.	h	m	s	°	′	″
July 16		46	46.289	-17	8	21.43
18			.254			21.84
			46.272			21.64

No. 2267.

1901.	h	m	s	°	′	″
Aug. 2		47	2.756	-21	19	15.19
6			.715			14.65
			2.736			14 92

No. 2268.

1901.	h	m	s	°	′	″
July 24		47	31.334	-14	51	24.47
26			.260			24.76
			31.297			24.61

No. 2269.

1901.	h	m	s	°	′	″
July 19	19	47	41.240	−18	9	51.23
22			.228			51.27
			41.234			51.25

No. 2270.

1901.	h	m	s	°	′	″
Aug. 12		48	22.069	−24	11	14.87
21			.133			14.48
			22.101			14.67

No. 2271.

1901.	h	m	s	°	′	″
Aug. 19		49	41.153	−21	45	59.86
20			.102			60.21
			41.127		46	0.03

No. 2272. ω Sagit.

1901.	h	m	s	°	′	″
July 16		49	46.559	−26	33	43.90
18			.603			43.90
Aug. 7			.564			43.91
8			.601			44.32
14			.612			44.13
15			.579			43.67
			46.586			43.97
Mean φ (6)				37	20	26.20
1902.						
Sep. 22			50.304			34.54
26			.270			34.92
			50.287			34.73
Mean φ (2)				37	20	26 30

No. 2273.

1901.	h	m	s	°	′	″
July 19		50	45.883	−23	19	38.91
22			.869			38.85
			45.876			38.88

No. 2274.

1901.	h	m	s	°	′	″
July 24		50	52.445	−27	25	57.08
26			.394			56.84
			52.420			56.96

No. 2275.

1901.	h	m	s	°	′	″
Aug. 2		52	20.177	−15	45	15.00
6			.164			13.92
			20.170			14.46

No. 2276.

1901.	h	m	s	°	′	″
July 16		52	55.434	−26	27	48.54
18			.433			49.05
			55.433			48.80

No. 2277.

1901.	h	m	s	°	′	″
Aug. 19	19	53	20.742	−18	13	35.83
20			.662			35.83
			20.702			35.83

No. 2278.

1901.	h	m	s	°	′	″
July 19		53	42.171	−22	28	47.15
22			.179			46.70
			42.175			46.92
1902.						
July 2			45.734			37.10
7			.760			37.73
			45.747			37.41

No. 2279.

1901.	h	m	s	°	′	″
July 24		54	34.234	−21	7	37.91
26			.152			38.20
			34.193			38.06

No. 2280.

1901.	h	m	s	°	′	″
Aug. 12		54	44.768	−20	7	39.84
21			.772			39.99
			44.770			39.91
1902.						
July 17			48.311			30.09
18			.242			29.77
			48.276			29.93

No. 2281.

1901.	h	m	s	°	′	″
Aug. 14		54	52.673	−24	27	24.55
15			.577			25.36
			52.625			24.95

No. 2282.

1901.	h	m	s	°	′	″
Aug. 2		55	30.900	−23	0	33.39
6			.942			33.14
			30.921			33.26

No. 2283.

1901.	h	m	s	°	′	″
Aug. 7		55	52.347	−17	8	23.75
8			.325			23.97
			52.336			23.86

No. 2284. 63 Sagit.

1901.	h	m	s	°	′	″
Aug. 12		56	25.930	−13	54	41.29
13			.916			41.45
19			.885			41.51
20			.876			41.31
			25.902			41.39
Mean φ (4)				37	20	26.82

No. 2284. 63 Sagit. (*Con.*)

1902.	h	m	s	°	′	″
Sep. 17	19	56	29.228	−13	54	31.29
18			.270			31.17
22			.254			31.15
26			.232			31.27
			29.246			31.22
Mean φ (4)				37	20	26.34

62 Sagit.

1902.	h	m	s	°	′	″
July 2		56	37.971	−27	58	56.36
7			38.028			56.55
17			.033			55.87
18			.007			56.35
Sep. 3			.005			56.47
4			.034			57.05
11			.030			56.68
12			37.982			56.51
			38.011			56.48
Mean φ (8)				37	20	26.17

No. 2285.

1901.	h	m	s	°	′	″
July 16		57	0.227	−26	19	1.29
18			.182			1.93
			0.204			1.61

No. 2286.

1901.	h	m	s	°	′	″
July 19		57	11.517	−18	49	12.45
22			.508			12.04
			11.513			12.24

No. 2287.

1901.	h	m	s	°	′	″
July 24		57	52.352	−22	52	25.17
26			.337			25.26
			52.344			25.21

No. 2288.

1901.	h	m	s	°	′	″
Aug. 14			……	−15	41	25.02
15		57	57.153			25.33
21			.093			25.10
			57.123			25.15

No. 2289.

1901.	h	m	s	°	′	″
Aug. 2		59	8.627	−21	35	35.18
6			.582			34.86
			8.605			35.02

No. 2290.

1901.	h	m	s	°	′	″
Aug. 7		59	9.646	−27	5	35.65
8			.640			35.19
			9.643			35.42

No. 2291.

1901.	h m s	° ′ ″
July 19	20 0 42.145	−20 25 30.28
22	.118	29.58
	42.132	29.93

No. 2292.

1901.		
July 24	1 23.916	−17 28 44.83
26	.847	44.88
	23.882	44.86

No. 2293.

1901.		
Aug. 12	1 45.498	−24 10 2.87
19	.506	3.03
	45.502	2.95

No. 2294.

1901.		
Aug. 2	2 29.856	−19 5 25.07
6	.893	23.92
	29.875	24.49

No. 2295.

1901.		
Aug. 7	2 54.070	−15 18 56.74
8	.157	56.88
	54.113	56.81

No. 2296.

1901.		
Aug. 14	3 2.226	−14 32 29.60
15	.140	30.15
	2.183	29.87

No. 2297.

1901.		
July 19	3 46.329	−20 52 52.07
22	.344	51.77
	46.337	51.92

No. 2298.

1902.		
Sep. 17	4 12.373	−25 34 16.48
18	.362	16.76
	12.367	16.62

No. 2299.

1901.		
July 24	5 33.551	−24 31 9.91
26	.567	9.90
	33.559	9.90

No. 2300.

1901.		
Aug. 2	5 34.935	−22 14 39.91
6	.897	38.99
	34.916	39.45

No. 2301.

1901.	h m s	° ′ ″
Aug. 7	20 5 42.487	−15 47 21.69
8	.429	21.26
	42.458	21.47

No. 2302. ξ Capric.

1901.		
July 19	6 54.917	−12 54 27.77
22	.946	26.90
Aug. 21	.944	27.19
	54.936	27.29
Mean φ (3)		37 20 26.22

No. 2303.

1901.		
Aug. 12	6 56.377	−26 29 11.76
19	.388	12.40
	56.383	12.08

No. 2304.

1901.		
Aug. 15	8 28.671	−22 20 16.36
20	.704	16.38
	28.688	16.37

No. 2305.

1902.		
Sep. 17	8 50.371	−18 23 29.20
18	.384	27.97
	50.377	28.59

No. 2306.

1901.		
July 24	8 59.462	−19 30 24.91
26	.465	26.05
	59.464	25.48

No. 2307.

1901.		
Aug. 7	9 6.977	−27 19 42.84
8	.934	42.99
	6.955	42.92

No. 2308.

1901.		
Aug. 2	9 35.141	−17 9 4.59
6	.180	4.12
	35.161	4.35

No. 2309.

1902.		
Sep. 22	9 39.337	−13 40 51.77
26	.294	51.56
	39.315	51.66

No. 2310.

1901.		
Aug. 12	9 48.965	−15 5 2.98
19	49.017	3.07
	48.991	3.03

No. 2311.

1901.	h m s	° ′ ″
Aug. 15	20 10 18.771	−23 48 46.78
20	.824	47.10
	18.797	46.94

No. 2312.

1902.		
Sep. 17	10 34.160	−20 19 19.04
18	.201	19.98
	34.180	19.51

No. 2313.

1901.		
July 19	11 0.606	−21 14 13.82
22	.661	13.49
	0.633	13.66

No. 2314.

1902.		
Sep. 22	11 14.669	−15 28 57.32
26	.589	57.00
	14.629	57.16

No. 2315.

1901.		
Aug. 2	11 18.768	−18 44 10.87
6	.758	9.95
	18.763	10.41

No. 2316. 4 Capric.

1901.		
July 24	12 12.504	−22 6 57.03
26	.511	57.46
Aug. 21	.468	57.51
	12.494	57.33
Mean φ (3)		37 20 26.86
1902.		
July 2	16.008	45.92
7	.026	45.99
17	15.951	46.27
18	16.014	46.47
Sep. 3	.015	46.44
4	15.992	46.46
11	.969	46.94
12	16.042	47.30
	16.002	46.47
Mean φ (8)		37 20 27.04

No. 2317.

1901.		
Aug. 7	13 39.232	−21 15 36.57
8	.215	37.25
	39.223	36.91

No. 2318.

1901.		
Aug. 12	13 40.941	−19 25 39.53
19	.904	39.29
	40.923	39.41

No. 2319.

1901.	h	m	s	°	′	″
Aug. 15	20	13	49.829	-25	32	4.21
20			.872			4.40
			49.850			4.30

No. 2320.

1902.						
Sep. 18		14	7.415	-17	47	42.31
22			.434			41.66
			7.424			41.98

Anon.

1902.						
Sep. 17		14	31.714	-17	48	18.53
26			.789			18.37
			31.752			18.45

No. 2321.

1901.						
July 19		15	10.401	-13	4	14.82
22			.387			14.32
			10.394			14.57

No. 2322.

1901.						
July 24		15	12.898	-15	5	49.57
26			.874			49.60
			12.886			49 58

No. 2323. β Capric.

1901.						
Aug. 2		15	27.022	-15	5	39.11
6			.016			38.58
			27.019			38.84
1902.						
Sep. 3			30.348			27.40
4			.368			27.77
11			.367			27.92
12			.346			27.65
			30.357			27.69
Mean φ (4)				37	20	26.42

No. 2324.

1901.						
Aug. 7		15	37.960	-23	47	24.35
8			38.033			21.64
			37.996			24.50

No. 2325.

1901.						
Aug. 12		16	56.456	-16	50	10.66
19			.450			10.52
			56.453			10.59

No. 2326.

1901.						
July 19		18	32.942	-22	22	7.06
22			.906			6.94
			32.924			7.00

No. 2327.

1901.	h	m	s	°	′	″
July 24	20	18	36.222	-13	42	54.96
26			.185			55.29
			36.204			55.13

No. 2328.

1901.						
Aug. 2		18	39.982	-26	9	9.94
6			.940			8.89
			39.961			9.41

No. 2329.

1901.						
Aug. 7		19	21.622	-19	45	15.35
8			.598			15.79
			21.610			15.57

No. 2330.

1901.						
Aug. 12		20	20 530	-25	16	9.24
19			.481			9.29
			20.506			9.26

No. 2331.

1901.						
Aug. 15		20	53.491	-17	42	2.28
20			.543			2.39
			53.517			2.33

No. 2332.

1902.						
Sep. 17		21	9.271	-21	7	45.64
18			.217			45.83
			9.244			45.74

No. 2333. π Capric.

1901.						
July 19		21	39.283	-18	32	11.39
22			.301			11.03
			39.292			11.21
1902.						
July 2			42.704		31	59.63
7			.728			59 43
17			.697			59.62
18			.720			59.04
			42.712			59.43
Mean φ (4)				37	20	27.18

No. 2334.

1901.						
July 24		22	31.855	-14	19	25.57
26			.754			25.68
			31.805			25.62

No. 2335.

1901.						
Aug. 2		22	52.214	-24	18	35.78
6			.213			35.28
			52.214			35.53

No. 2336.

1901.	h	m	s	°	′	″
Aug. 7	20	23	8.924	-16	4	8.86
8			.837			9.17
			8.881			9.01

No. 2337.

1901.						
Aug. 12		23	14.964	-21	13	47.01
19			.955			46.95
			14.960			46.98

No. 2338.

1901.						
Aug. 15		23	42.823	-22	43	11.42
20			.820			11.78
			42.822			11.60

No. 2339.

1902.						
Sep. 17		24	5.021	-12	55	2.35
18			.054			3.42
			5.037			2.89

No. 2340.

1902.						
Sep. 3		24	16.785	-18	54	27.17
4			.803			27.72
			16.794			27.44

No. 2341.

1901.						
July 19		25	31.580	-15	23	13.90
22			.564			13.37
			31.572			13.63

No. 2342.

1901.						
July 24		25	43.102	-17	28	16.60
26			.119			16.93
			43.111			16.77

No. 2343. Mayer 866.

1901.						
Aug. 2		26	58.769	-25	16	42.12
6			.731			41.18
12			.738			42.18
15			.755			41.82
19			.792			41.13
20			.828			40.78
			58.769			41 53
Mean φ (6)				37	20	26.05
1902.						
Sep. 22		27	2.348			29.69
26			.362			29.65
			2.355			29.67
Mean φ (2)				37	20	26.28

			No. 2344.			
1901.	h	m	s	°	′	″
Aug. 7	20	27	41.381	−21	14	1.39
8			.306			1.62
			41.344			1.50
1902.						
Sep. 11			44.860		13	49.44
12			.860			48.92
			44.860			49.18
1902.			**No. 2345.**			
Sep. 17		28	21.515	−23	35	3.72
18			.452			4.56
			21.483			4.14
1902.			**No. 2346.**			
Sep. 22		28	44.436	−14	3	28.12
26			.472			28.56
			44.454			28.34
1901.			**No. 2347.**			
July 19		28	46.150	−19	44	9.42
22			.139			8.66
			46.144			9.04
1902.						
Sep. 3			49.648		43	57.39
4			.606			57.42
			49.627			57.40
1901.			**No. 2348.**			
July 24		29	46.356	−18	7	39.12
26			.319			39.09
			46.338			39.11
1902.						
Sep. 11			49.759			26.93
12			.744			27.64
			49.752			27.28
1901.			**No. 2349.**			
Aug. 15		29	56.127	−16	51	57.24
20			.185			57.30
			56.156			57.27
1901.			**No. 2350.**			
Aug. 2		30	42.773	−20	55	38.59
6			.785			38.44
			42.779			38.51
1902.						
Sep. 3			46.201			25.56
4			.197			26.99
			46.199			26.27

			No. 2351.			
1901.	h	m	s	°	′	″
Aug. 7	20	30	48.932	−12	43	26.40
8			.812			26.20
			48.872			26.30
1901.			**No. 2352.**			
Aug. 12		31	56.165	−22	47	16.83
19			.206			17.06
			56.186			16.95
1902.			**No. 2353.**			
Sep. 22		32	34.413	−11	22	27.03
26			.372			27.03
			34.392			27.03
1901.			**No. 2354.**			
July 19		33	44.252	−15	18	7.74
22			.209			7.18
			44.231			7.46
1901.			**No. 2355.**			
July 24		33	51.788	−20	1	11.09
26.			.766			10.47
			51.777			10.78
1902.						
Sep. 3			55.245		0	59.47
4			.213			[60.70]
			55.229			
1901.			**No. 2356.**			
Aug. 2		34	18.361	−24	8	9.31
6			.390			8.19
			18.376			8.75
1901.			**No. 2357. υ Capric.**			
Aug. 7		34	24.956	−18	29	14.74
8			.867			15.05
14			.902			14.88
15			.879			14.96
20			.905			14.86
			24.902			14.90
Mean φ (5)				37	20	27.04
1902.						
Sep. 11			28.319			2.19
12			.304			2.35
17			.279			1.81
18			.272			2.33
			28.293			2.17
Mean φ (4)				37	20	27.13

			No. 2358.			
1901.	h	m	s	°	′	″
Aug. 12	20	34	58.780	−16	28	35.18
19			.758			35.06
			58.769			35.12
1902.			**No. 2359.**			
Sep. 22		35	47.081	−13	50	51.96
26			.090			52.42
			47.086			52.19
1901.			**No. 2360.**			
Aug. 15		36	21.810	−21	37	39.25
20			.848			39.20
			21.829			39.22
1902.						
Sep. 11			25.369			27.26
12			.199			26.12
			25.284			26.69
1901.			**No. 2361.**			
July 19		37	10.018	−13	26	41.59
22			.029			41.14
			10.024			41.37
1901.			**No. 2362.**			
July 24		38	9.217	−11	59	49.29
26			.223			50.06
			9.220			49.67
1901.			**No. 2363.**			
Aug. 2		38	15.208	−19	41	56.76
6			.153			56.80
			15.180			56.78
1902.						
Sep. 3			18.652			44.88
4			.581			44.21
			18.617			44.54
1901.			**No. 2364.**			
Aug. 7		39	3.026	−14	32	35.18
8			.085			34.85
			3.056			35.01
1901.			**No. 2365.**			
Aug. 12		39	13.069	−10	50	57.45
19			.089			57.46
21			.105			56.88
			13.088			57.26

No. 2366.

1901.	h	m	s	°	′	″
Aug. 15	20	39	41.323	−16	9	26.01
20			.369			25.26
			41.346			25.64

No. 2367.

1902.						
Sep. 17		40	29.166	−21	52	13.43
18			.146			14.17
			29.156			13.80

No. 2368.

1901.						
July 19		40	28.093	−24	5	4.14
22			.063			3.70
			28.078			3.92

No. 2369.

1901.						
July 24		40	59.160	−17	31	21.02
26			.189			21.43
			59.174			21.22
1902.						
Sep. 3		41	2.592			9.22
4			.565			9.62
			2.579			9.42

q.

1902.						
Sep. 11		41	48.163	−18	58	45.84
12			.150			45.59
			48.157			45.71

No. 2370. ε Aquarii.

1901.						
Aug. 2		42	19.087	−9	51	29.95
6			.131			29.51
			19.109			29.73

No. 2371.

1901.						
Aug. 7		42	35.170	−23	6	0.67
8			.081			1.07
			35.126			0.87

No. 2372.

1901.						
Aug. 12		42	39.096	−16	53	2.56
19			.102			2.65
			39.099			2.60

No. 2373.

1901.						
Aug. 15		43	31.757	−20	59	29.65
20			.804			29.72
			31.781			29.68
1902.						
Sep. 11			35.302			16.80
12			.224			17.26
			35.263			17.03

No. 2374.

1902.	h	m	s	°	′	″
Sep. 3	20	43	47.072	−18	23	52.64
4			.075			53.34
			47.074			52.99

No. 2375.

1901.						
July 19		44	0.339	−11	49	17.66
22			.375			17.02
			0.357			17.34

No. 2376.

1902.						
Sep. 22		45	6.998	−15	52	31.40
26			.990			31.98
			6.994			31.69

No. 2377. P. 325.

1901.						
Aug. 2		45	14.377	−12	54	42.64
6			.422			42.41
21			.417			42.65
			14.405			42.57
Mean φ (3)				37	20	26.35

No. 2378.

1901.						
July 24		45	49.987	−14	17	33.49
26			.996			33.99
			49.992			33.74

No. 2379.

1901.						
Aug. 12		46	24.810	−10	41	17.30
19			.839			16.62
			24.824			16.96

No. 2380.

1901.						
Aug. 15		46	36.425	−20	0	53.85
20			.482			53.40
			36.453			53.62
1902.						
Sep. 11			39.860			39.57
12			.932			40.00
			39.896			39.78

No. 2381.

1902.						
Sep. 17		46	42.502	−21	35	55.83
18			.495			56.92
			42.499			56.38

No. 2382.

1902.						
Sep. 22		47	6.578	−13	34	16.03
26			.623			16.80
			6.600			16.41

No. 2383.

1901.	h	m	s	°	′	″
July 19	20	47	21.610	−17	22	41.00
22			.686			40.48
			21.648			40.74

No. 2384.

1901.						
Aug. 7		47	40.760	−11	56	52.87
8			.669			52.52
			40.714			52.70

No. 2385.

1901.						
July 24		47	53.746	−19	29	14.99
26			.736			15.16
			53.741			15.08
1902.						
Sep. 3			57.201			2.14
4			.174			1.89
			57.187			2.01

No. 2386.

1901.						
Aug. 2		48	12.441	−24	39	15.62
6			.379			15.43
			12.410			15.53

No. 2387. 19 Capric.

1901.						
Aug. 7		49	12.232	−18	17	54.98
8			[.132]			55.25
12			.231			55.42
19			.268			55.78
21			.249			55.59
			12.245			55.40
Mean φ (5)				37	20	26.64
1902.						
Sep. 3			15.631			41.55
4			.633			41.25
			15.632			41.40

No. 2388.

1901.						
Aug. 15		49	18.800	−23	13	41.80
20			.796			40.47
			18.798			41.13

No. 2389.

1902.						
Sep. 17		49	28.424	−15	39	18.36
18			.414			18.37
			28.419			18.36

No. 2390.

1902.						
Sep. 22		50	16.232	−13	14	28.74
26			.229			29.04
			16.230			28.89

No. 2391.

1901.	h	m	s	°	′	″
July 19	20	51	9.266	−22	23	7.19
22			.206			7.25
			9.236			7.22

No. 2392.

1901.	h	m	s	°	′	″
July 24		51	33.012	−10	4	37.60
26			.044			37.78
			33.028			37.69

No. 2393.

1901.	h	m	s	°	′	″
Aug. 2		52	8.144	−16	24	45.50
6			.116			45.25
			8.130			45.37

No. 2394.

1901.	h	m	s	°	′	″
Aug. 7		52	37.170	−12	20	11.48
8			.165			11.38
			37.168			11.43

No. 2395.

1901.	h	m	s	°	′	″
Aug. 12		53	12.931	−14	51	55.31
19			13.003			55.11
			12.967			55.21

No. 2396.

1901.	h	m	s	°	′	″
Aug. 15		53	44.051	−20	49	40.88
20			.084			40.35
			44.068			40.61

No. 2397.

1902.	h	m	s	°	′	″
Sep. 17		53	54.936	−11	5	36.96
18			.964			36.41
			54.950			36.69

No. 2398.

1902.	h	m	s	°	′	″
Sep. 11		54	2.063	−19	24	54.21
12			.091			54.79
			2.077			54.50

No. 2399.

1901.	h	m	s	°	′	″
July 19		55	17.510	−17	55	1.64
22			.506			1.30
			17.508			1.47
1902.						
Sep. 3			20.889		54	47.45
4			.862			47.23
			20.876			47.34

No. 2400.

1901.	h	m	s	°	′	″
July 24	20	55	40.202	−23	27	56.86
26			.253			56.92
			40.227			56.89

No. 2401.

1901.	h	m	s	°	′	″
Aug. 2		55	41.045	−13	55	2.30
6			.049			1.88
			41.047			2.09

No. 2402.

1901.	h	m	s	°	′	″
Aug. 7		56	26.203	−21	43	13.59
8			.213			13.87
			26.208			13.73

No. 2403.

1901.	h	m	s	°	′	″
Aug. 12		56	35.897	−12	5	2.61
19			.874			2.55
			35.886			2.58

No. 2404.

1901.	h	m	s	°	′	″
Aug. 15		57	3.850	−15	51	43.21
20			.869			43.09
			3.859			43.15

No. 2405.

1902.	h	m	s	°	′	″
Sep. 17		57	17.441	−10	22	54.96
18			.396			54.66
			17.418			54.81

c.

1902.	h	m	s	°	′	″
Sep. 11		58	29.896	−18	29	58.55
12			.903			58.03
			29.900			58.29

No. 2406. η Capric.

1901.	h	m	s	°	′	″
Aug. 2		58	46.314	−20	14	47.69
6			.300			47.24
			46.307			47.46

No. 2407. θ Capric.

1901.	h	m	s	°	′	″
July 19	21	0	22.983	−17	37	34.85
22			.956			34.93
24			.974			34.62
26			.971			34.83
Aug. 7			.974			34.63
8			.957			34.74
			22.969			34.77
Mean φ (6)				37	20	26.14

No. 2407. θ Capric. (*Con.*)

1902.	h	m	s	°	′	″
Sep. 3	21	0	26.352	−17	37	20.73
4			.344			20.03
29			.360			20.86
30			.327			20.77
Oct. 1			.347			21.08
2			.376			20.93
3			.390			20.74
15			.318			20.93
			26.352			20.76
Mean φ (8)				37	20	25.73

No. 2408.

1901.	h	m	s	°	′	″
Aug. 12		0	29.560	−11	0	24.01
19			.578			24.52
			29.569			24.27

No. 2409.

1901.	h	m	s	°	′	″
Aug. 15		1	40.480	−14	19	8.71
20			.376			8.80
			40.428			8.76

No. 2410.

1901.	h	m	s	°	′	″
Aug. 2		1	53.348	−19	29	3.75
6			.339			4.10
			53.343			3.92
1902.						
Sep. 11			56.703		28	48.66
12			.732			48.93
			56.717			48.79

No. 2411.

1902.	h	m	s	°	′	″
Sep. 17		2	17.126	−22	43	44.22
18			.126			44.89
			17.126			44.55

No. 2412.

1902.	h	m	s	°	′	″
Sep. 22		2	53.200	−13	16	32.27
26			.189			32.51
			53.194			32.39

No. 2413. χ Capric.

1902.	h	m	s	°	′	″
Sep. 29		2	56.906	−21	35	16.29
30			.907			15.64
			56.907			15.96
Mean φ (2)				37	20	26.86

No. 2414.

1902.	h	m	s	°	′	″
Oct. 1		3	56.935	−20	57	0.48
2			.859			0.89
			56.897			0.68

No. 2415. ν Aquar.

1901.	h	m	s	°	′	″
July 19	21	4	12.127	−11	46	21.79
22			.140			21.60
24			.102			21.60
26			.109			21.73
Aug. 12			.172			21.48
19			.150			21.34
			12.133			21.59
Mean φ (6)				37	20	26.89
1902.			**No. 2416.**			
Sep. 3		4	41.548	−16	5	58.67
4			.640			58.89
			41.594			58.78
1901.			**No. 2417.**			
Aug. 2		4	50.304	−17	21	37.00
6			.307			36.62
			50.306			36.81
1902.						
Sep. 11			53.699			21.81
12			.670			21.90
			53.684			21.85
1901.			**No. 2418.**			
Aug. 7		4	56.372	−23	42	42.19
8			.407			41.93
			56.390			42.06
1901.			**No. 2419.**			
Aug. 15		4	57.848	−18	43	59.52
20			.826			59.06
			57.837			59.29
1902.						
Oct. 3		5	1.180			44.79
15			.245			44.86
			1.213			44.83
1902.			**No. 2420.**			
Sep. 17		5	26.687	−10	36	31.12
18			.681			30.76
			26.684			30.94
1902.			**No. 2421.**			
Sep. 22		5	29.888	−9	45	6.59
26			.940			6.06
			29.914			6.32
1902.			**No. 2422.**			
Sep. 29		6	16.586	−14	52	22.88
30			.583			23.76
			16.584			23.32

No. 2423.

1901.	h	m	s	°	′	″
Aug. 2	21	8	20.217	−20	29	47.11
6			.174			47.47
			20.196			47.29
1901.			**No. 2424.**			
Aug. 7		8	20.567	−22	37	13.31
8			.554			13.36
			20.561			13 33
1901.			**No. 2425.**			
Aug. 12		8	43.145	−12	52	30.22
19			.140			30.74
			43.142			30.48
1901.			**No. 2426.**			
Aug. 15		8	55.374	−11	0	51.76
20			.422			51.54
			55.398			51.65
1902.			**No. 2427.**			
Sep. 3		9	37.725	−17	45	1.98
4			.674			2.83
			37.700			2.40
1902.			**No. 2428.**			
Sep. 17		10	3.327	−21	3	30.59
18			.288			29.70
			3.307			30.15
1902.			**No. 2429.**			
Sep. 22		10	8.185	−16	29	51.74
26			.278			51.43
			8.232			51.59
1901.			**No. 2430.**			
Oct. 1		10	19.383	−15	34	45.17
2			.448			44.90
			19.416			45.03
1902.			**No. 2431.**			
Sep. 29		10	37.616	−13	36	30.99
30			.569			31.11
			37.592			31.05
1901.			**No. 2432.**			
Aug. 12		10	58.920	−9	37	37.30
19			.944			37.93
			58.932			37.61

No. 2433.

1901.	h	m	s	°	′	″
Aug. 2	21	12	24.257	−18	23	59.95
6			.194			60.20
			24.226		24	0.07
1904.			**No. 2434.**			
Aug. 7		12	37.516	−19	6	7.05
8			.525			7.46
			37.520			7.26
1901.			**No. 2435.**			
Aug. 15		12	49.445	−20	45	1.14
20			.420			0.67
			49.432			0.91
1902.			**No. 2436.**			
Sep. 17		13	12.405	−13	0	24.92
18			.369			24.84
			12.387			24.88
1902.			**No. 2437.**			
Sep. 22		13	48.462	−16	35	28.83
26			.434			28.23
			48.448			28.53
1902.			**No. 2438.**			
Sep. 29		14	25.608	−14	25	51.78
30			.617			52.12
			25.613			51.95
1901.			**No. 2439.**			
Aug. 2		15	27.122	−11	46	8.60
6			.089			9.06
			27.106			8.83
1901.			**No. 2440.**			
Aug. 7		15	48.138	−19	56	52.84
8			.225			52.69
			48.181			52.76
1901.			**No. 2441.**			
Aug. 12		16	1.852	−15	34	32.10
19			.773			32.68
			1.813			32.39
1902.			**No. 2442.**			
Oct. 3		16	43.260	−7	56	15.36
15			.379			15.61
			43.320			15.48

No. 2443. ι **Capric.**

1901.	h	m	s	°	′	″
Aug. 15	21	16	44.101	−17	15	21.55
20			.151			22.52
			44.126			22.04
Mean φ (2)				37	20	25.63
1902.						
Sep. 3			47.469			7.34
4			.478			6.17
11			.478			6.97
12			.499			6.67
17			.486			7.05
18			.473			7.15
Oct. 1			.518			7.29
2			.461			7.29
			47.483			6.99
Mean φ (8)				37	20	25.85

No. 2444.

1902.						
Sep. 22	17		41.021	− 9	44	13.16
26			.088			14.09
			41.054			13.62

No. 2445.

1902.						
Sep. 29	18		36.205	−21	16	6.14
30			.247			7.42
			36.226			6.78

No. 2446. 18 Aquar.

1901.						
Aug. 2	18		46.954	−13	18	10.57
6			.978			10.95
			46.966			10.76
Mean φ (2)				37	20	25.92

No. 2447.

1902.						
Oct. 3	19		44.608	−16	49	25.76
15			.736			25.34
			44.672			25.55

No. 2448.

1902.						
Oct. 1	19		57.138	−10	9	57.74
2			.117			57.81
			57.127			57.77

No. 2449.

1901.						
Aug. 15	19		58.845	−14	42	13.28
20			.841			13.59
			58.843			13.44

No. 2450.

1901.						
Aug. 7	20		44.601	−18	34	36.39
8			.641			36.66
			44.621			36.52

No. 2451.

1902.	h	m	s	°	′	″
Sep. 22	21	21	3.173	−15	40	9.56
26			.213			9.06
			3.193			9.31

No. 2452.

1902.						
Sep. 17	21		9.052	−11	20	27.44
18			.042			27.24
			9.047			27.34

No. 2453.

1901.						
Aug. 12	21		29.570	−19	29	10.35
19			.538			9.39
			29.554			9.87

No. 2454.

1902.						
Sep. 29	21		41.537	−21	37	13.06
30			.522			13.55
			41.530			13.30

No. 2455.

1901.						
Aug. 2	21		54.209	−20	38	24.16
6			.180			23.95
			54.194			24.06

No. 2456.

1902.						
Oct. 1	22		11.581	−7	26	19.61
2			.527			[22.12]
			11.554			19.61

No. 2457.

1901.						
Aug. 7	22		16.554	−12	5	42.29
8			.529			42.16
			16.541			42.23

No. 2458.

1901.						
Aug. 12	23		[4.758]	−22	14	18.72
19			.775			19.46
21			.774			....
			4.774			19.09

No. 2459.

1901.						
Aug. 20	24		0.046	−13	12	14.65
21	23		59.982			14.31
	24		0.014			14.48

No. 2460.

1902.						
Sep. 17	24		18.276	−14	27	12.96
18			.218			12.71
			18.247			12.83

No. 2461.

1902.	h	m	s	°	′	″
Sep. 22	21	24	29.624	−19	34	31.14
26			.688			31.90
			29.656			31.52

No. 2462.

1902.						
Sep. 29		24	44.448	− 9	1	50.58
30			.453			50.97
			44.450			50.77

No. 2463.

1901.						
Aug. 2		25	45.115	−17	41	40.15
6			.105			40.11
			45.110			40.13

No. 2464.

1901.						
Aug. 7		26	16.678	−10	10	38.15
8			.624			37.98
			16.651			38.07

No. 2465.

1901.						
Aug. 12		26	59.669	−12	42	14.94
19			.674			15.08
			59.672			15.01

No. 2466.

1901.						
Aug. 20		27	15.001	−14	54	17.53
21			14.874			17.26
			14.937			17.40

No. 2467.

1902.						
Sep. 17		28	15.462	−16	37	55.56
18			.419			55.92
			15.440			55.74

No. 2468.

1902.						
Sep. 22		29	20 857	−20	31	16.85
26			.871			16.72
			20.864			16.78

No. 2469.

1902.						
Sep. 29		29	29.004	− 9	31	20.25
30			.035			21.01
			29.020			20.63

No. 2470.

1901.						
Aug. 2		30	51.532	−18	50	4.91
6			.505			5.13
			51.519			5.02

No. 2471.

1901.	h	m	s	°	′	″
Aug. 7	21	31	20.069	−13	54	5.95
8			.119			6.26
			20.094			6.10

No. 2472.

1902.						
Oct. 1		31	35.690	−19	54	19.12
2			.664			18.71
			35.677			18.91

No. 2473.

1901.						
Aug. 15		31	36.081	−10	37	4.25
20			.219			3.83
			36.150			4.04

No. 2474.

1902.						
Sep. 17		32	2.767	−11	54	0.45
18			.725			0.42
			2.746			0.44

No. 2475. ξ Aquar.

1901.						
Aug. 12		32	28.901	− 8	17	53.46
19			.944			54.03
			28.923			53.74
Mean φ (2)				37	20	26.28
1902.						
Sep. 22			32.143			37.67
26			.189			37.63
			32.166			37.65
Mean φ (2)				37	20	26.08

No. 2476.

1902.						
Sep. 29		32	51.680	−15	21	5.69
30			.711			6.01
			51.696			5.85

No. 2477.

1902.						
Oct. 1		33	36.349	−22	9	20.59
2			.359			22.14
			36.354			21.36

No. 2478.

1902.						
Oct. 3		34	12.159	−11	1	5.72
15			.181			5.62
			12.170			5.67

No. 2479.

1901.						
Aug. 2		34	16.453	−13	4	14.15
6			.407			14.49
			16.430			14.32

No. 2480. γ Capric.

1901.	h	m	s	°	′	″
Aug. 15	21	34	36.397	−17	6	34.36
20			.377			33.76
			36.387			34.06
Mean φ (2)				37	20	25.86
1902.						
Sep. 3			39.755			18.48
4			.758			19.06
11			.741			17.85
12			.760			18.52
Nov. 4			.757			19.51
6			.748			18.33
			39.753			18.63
Mean φ (6)				37	20	26.65

No. 2481.

1901.						
Aug. 7		35	40.681	− 9	35	29.03
8			.626			28.78
			40.653			28.90

No. 2482.

1901.						
Aug. 12		36	9.947	−14	29	20.76
19			.934			21.76
			9.940			21.26

No. 2483.

1902.						
Sep. 17		36	42.514	−12	41	46.03
18			.527			46.01
			42.520			46.02

No. 2484. κ Capric.

1902.						
Sep. 3		37	11.274	−19	18	47.37
4			.275			47.44
11			.266			46.79
12			.209			46.26
Oct. 3			.244			47.36
15			.278			47.11
			11.258			47.05
Mean φ (6)				37	20	26.24

No. 2485.

1902.						
Sep. 29		37	29.929	−20	51	31.56
30			.964			31.99
			29.947			31.77

No. 2486.

1902.						
Oct. 1		37	43.675	−14	50	52.09
2			.681			52.76
			43.678			52.43

No. 2487.

1902.	h	m	s	°	′	″
Sep. 22	21	37	44.677	−20	4	6.18
26			.665			5.85
			44.671			6.02

No. 2488.

1901.						
Aug. 2		38	4.126	−17	50	22.08
6			.067			22.04
			4.096			22.06

No. 2489.

1901.						
Aug. 15		38	10.518	− 7	51	39.35
20			.499			39.39
			10.508			39.37

No. 2490.

1901.						
Aug. 7		38	36.670	−15	12	10.60
8			.709			11.43
			36.690			11.01

No. 2491.

1901.						
Aug. 12		39	34.301	−10	40	1.85
19			.332			3.67
			34.316			2.76

No. 2492.

1902.						
Sep. 17		39	46.795	− 9	31	58.69
18			.754			56.89
			46.774			57.79

No. 2493.

1902.						
Sep. 22		41	2.696	− 9	43	40.91
26			.702			41.03
			2.699			40.97

No. 2494.

1902.						
Sep. 29		41	15.644	−11	49	4.05
30			.632			2.66
			15.638			3.35

No. 2495. δ Capric.

1901.						
Aug. 2		41	34.705	−16	34	35.23
6			.674			35.84
7			.655			35.39
8			.672			35.36
21			.620			35.39
			34.665			35.44
Mean φ (5)				37	20	25.61

No. 2495. δ Capric. (*Con.*)

1902.	h	m	s	°	′	″
Sep. 3	21	41	37.982	−16	34	19.80
4			.940			20.04
11			.982			19.12
12			38.003			19.20
Oct. 3			37.974			19.96
15			.990			19.96
Nov. 4			.987			19.85
6			38.020			19.04
			37.985			19.62
Mean φ (8)				37	20	25.90

No. 2496.

1902.						
Oct. 1		42	19.186	−18	40	1.46
2			.147			1.56
			19.166			1.51

No. 2497.

1901.						
Aug. 12		42	25.513	− 6	22	32.56
19			.564			32.68
			25.539			32.62

No. 2498.

1901.						
Aug. 15		43	10.014	−14	37	29.14
20			9.987			28.71
			10.000			28.92

No. 2499.

1902.						
Sep. 17		43	51.669	−15	34	34.81
18			.618			35.29
			51.643			35.05

No. 2500.

1902.						
Sep. 22		44	23.271	−13	10	47.58
26			.360			47.45
			23.315			47.51

No. 2501.

1902.						
Sep. 29		44	49.683	−17	18	6.52
30			.725			6.91
			49.704			6.72

No. 2502.

1901.						
Aug. 2		44	52.362	−11	48	17.08
6			.368			16.99
			52.365			17.03

No. 2503.

1901.						
Aug. 7		45	19.022	−21	0	11.42
8			.064			11.29
			19.043			11.36

No. 2504.

1901.	h	m	s	°	′	″
Aug. 20	21	45	19.084	− 9	26	37.39
21			.012			38.15
			19.048			37.77

No. 2505.

1901.						
Aug. 12		45	48.310	− 8	22	15.21
19			.365			15.45
			48.337			15.33

No. 2506.

1902.						
Oct. 1		46	15.364	−19	4	48.00
2			.323			48.75
			15.344			48.37

No. 2507.

1902.						
Sep. 17		47	12.014	−16	43	6.64
18			.008			7.08
			12.011			6.86

No. 2508.

1902.						
Sep. 22		47	18.273	−17	31	35.06
26			.332			35.35
			18.302			35.20

No. 2509.

1902.						
Sep. 29		47	57.319	−14	0	47.45
30			.312			48.04
			57.316			47.75

No. 2510.

1901.						
Aug. 2		47	59.207	−14	39	20.09
6			.197			20.03
			59.202			20.06

No. 2511.

1901.						
Aug. 7		48	18.439	−10	46	39.91
8			.413			39.90
			18.426			39.90

No. 2512.

1901.						
Aug. 12		49	42.193	−12	26	17.54
19			.193			18.50
			42.193			18.02

No. 2513.

1901.						
Aug. 15		51	0.771	− 7	26	58.62
20			.682			57.93
			0.727			58.28

No. 2514.

1901.	h	m	s	°	′	″
Aug. 2	21	51	8.513	−10	3	19.77
6			.504			20.36
			8.509			20.06

No. 2515.

1901.						
Aug. 7		51	18.912	−18	22	2.44
8			.916			1.99
			18.914			2.21

No. 2516.

1902.						
Sep. 17		51	39.333	−19	39	20.23
18			.289			20.39
			39.311			20.31

No. 2517.

1902.						
Sep. 22		52	27.471	−15	35	21.14
26			.500			21.54
			27.485			21.34

No. 2518.

1902.						
Sep. 30		52	27.582	− 9	1	51.92
Oct. 1			.556			51.27
			27.569			51.60

No. 2519.

1901.						
Aug. 12		52	58.300	−12	34	25.60
19			.319			26.33
			58.310			25.97

No. 2520.

1901.						
Aug. 15		53	1.864	− 5	53	38.86
20			.984			39.01
			1.924			38.93

No. 2521.

1901.						
Aug. 2		54	28.349	−10	47	7.08
6			.276			7.92
			28.312			7.50

No. 2522.

1902.						
Sep. 22		55	48.216	−13	29	42.08
26			.293			41.98
			48.254			42.03

No. 2523.

1902.						
Sep. 30		55	57.281	−11	48	50.44
Oct. 1			.203			50.35
			57.242			50.40

No. 2524.

1901.	h	m	s	°	′	″
Aug. 7	21	56	5.356	−14	48	5.13
8			.311			4.95
			5.333			5.04

No. 2525.

1901.						
Aug. 12		56	9.365	−16	5	15 80
19			.337			16.27
			9.351			16.03

No. 2526.

1901.						
Aug. 15		56	34.209	−10	21	4.96
20			.196			4.89
			34.203			4.92

No. 2527.

1902.						
Sep. 17		56	48.288	−18	22	26.03
18			.183			25.95
			48.236			25.99

No. 2528.

1901.						
Aug. 7		58	4.066	−7	0	3.40
8			.107			2.89
			4.087			3.15

No. 2529.

1901.						
Aug. 2		58	18.997	−7	56	15.90
21			.982			15.72
			18.990			15.81

No. 2530.

1902.						
Oct. 2		58	49.571	−13	29	37.73
3			.550			37.91
			49.560			37.82

No. 2531.

1902.						
Sep. 30		58	51.997	−16	38	12.99
Oct. 1			.989			13.21
			51.993			13.10

No. 2532.

1902.						
Sep. 22		59	20.104	−9	11	25.15
26			.041			25.45
			20.072			25.30

No. 2533.

1901.						
Aug. 15		59	24.905	−5	19	11.30
20			.905			10.72
			24.905			11.01

No. 2534.

1901.	h	m	s	°	′	″
Nov. 4	22	0	50.002	−15	22	40.33
5			49.960			40.70
			49.981			40.52

No. 2535. *ι* **Aquar.**

1901.						
Aug. 7		1	5.482	−14	21	0.29
8			.511		20	59.84
12			.513			59.92
19			.501			59.97
			5.502		21	0.00
Mean φ (4)				37	20	26.03
1902.						
Sep. 17			8.735		20	42.64
18			.727			42.52
Nov. 21			.726			43.21
24			.750			43.45
			8.734			42.96
Mean φ (4)				37	20	26.13

No. 2536.

1902.						
Nov. 4		2	1.464	−20	2	50.11
5			.575			49.74
			1.520			49.92

No. 2537.

1902.						
Sep. 29		2	4.886	−10	55	29.84
30			.922			30.66
			4.904			30.25

No. 2538.

1902.						
Oct. 1		2	33.564	−6	18	26.46
2			.588			26.49
			33.576			26.48

No. 2539.

1902.						
Nov. 21		2	52.534	−18	18	44.65
24			.556			44.69
			52.545			44.67

No. 2540.

1902.						
Sep. 22		3	5.881	−17	1	21.48
26			.892			20.97
			5.887			21.22

No. 2541.

1902.						
Oct. 3		3	19.639	−12	5	33.32
15			.568			33.57
31			.633			33.71
			19.613			33.53

No. 2542.

1902.	h	m	s	°	′	″
Nov. 25	22	3	36.577	−18	59	58.25
26			.567			58.58
			36.572			58.42

No. 2543.

1901.						
Nov. 4		4	16.216	−9	17	9.89
5			.262			8.92
			16.239			9.41

No. 2544.

1902.						
Sep. 17		4	19.639	−8	1	1.06
18			.611			1.07
			19.625			1.06

No. 2545.

1902.						
Nov. 4		4	30.578	−15	36	10.94
(6) barely visible			[.695]			[13.08]
			30.578			10.94

No. 2546.

1902.						
Sep. 29		5	18.179	−11	18	9.82
30			.207			10.54
			18.193			10.18

No. 2547.

1902.						
Oct. 3		5	23.171	−12	2	49.48
15			.198			49.46
			23.185			49.47

No. 2548.

1902.						
Oct. 1		5	27.241	−4	44	55.44
2			.248			56.86
			27.244			56.15

No. 2549.

1902.						
Sep. 22		7	8.703	−14	40	35.47
26			.760			35.40
			8.731			35.43

No. 2550.

1902.						
Nov. 21		7	12.074	−18	30	41.71
24			.029			39.99
			12.051			40.85

No. 2551.

1902.						
Nov. 25		7	25.939	−10	54	36.05
26			.881			37.24
			25.910			36.64

No. 2552.

1901.	h	m	s	°	′	″
Nov. 4	22	7	30.622	−6	57	31.16
5			.600			30.73
			30.611			30.94

No. 2553.

1902.	h	m	s	°	′	″
Sep. 17		7	37.722	−5	12	14.05
18			.713			13.94
			37.718			14.00

No. 2554.

1902.	h	m	s	°	′	″
Nov. 4		7	45.494	−13	30	33.01
6			.434			32.82
			45.464			32.92

No. 2555.

1902.	h	m	s	°	′	″
Sep. 29		8	58.005	−19	44	0.03
30			.090			0.58
			58.047			0.30

No. 2556.

1902.	h	m	s	°	′	″
Oct. 1		9	19.871	−16	17	42.59
2			.946			42.83
			19.908			42.71

No. 2557.

1902.	h	m	s	°	′	″
Nov. 25		10	56.852	−17	41	35.58
26			.866			35.19
			56.859			35.38

No. 2558.

1902.	h	m	s	°	′	″
Sep. 22		11	31.579	−12	8	12.43
26			.583			12.30
			31.581			12.36

No. 2559.

1902.	h	m	s	°	′	″
Nov. 21		11	33.314	−13	19	13.06
24			.217			13.46
			33.266			13.26

No. 2560.

1902.	h	m	s	°	′	″
Oct. 3		11	39.534	−15	8	43.20
15			.496			42.92
			39.515			43.06

No. 2561. θ Aquar.

1901.	h	m	s	°	′	″
Aug. 15		11	36.698	−8	16	35.01
20			.630			34.61
Nov. 4			.636			35.50
5			.645			34.91
			36.652			35.01
Mean φ (4)				37	20	26.38

No. 2562.

1902.	h	m	s	°	′	″
Sep. 17	22	11	42.181	−9	31	42.13
18			.172			41.76
			42.176			41.95

No. 2563.

1902.	h	m	s	°	′	″
Sep. 29		11	59.600	−5	52	35.53
30			.566			36.15
			59.583			35.84

No. 2564.

1902.	h	m	s	°	′	″
Nov. 4		12	12.166	−18	39	6.03
6			.023			6.38
			12.094			6.20

No. 2565.

1902.	h	m	s	°	′	″
Oct. 1		12	38.216	−10	13	50.97
Nov. 25			.283			51.37
			38.250			51.17

No. 2566.

1902.	h	m	s	°	′	″
Oct. 3		13	45.201	−13	47	43.79
15			.231			44.26
			45.216			44.03

No. 2567.

1902.	h	m	s	°	′	″
Nov. 4		14	15.532	−17	11	37.52
6			.592			37.65
			15.562			37.59

No. 2568.

1901.	h	m	s	°	′	″
Nov. 4		14	40.577	−4	33	45.06
5			.554			44.44
			40.566			44.75

No. 2569.

1902.	h	m	s	°	′	″
Sep. 17		15	2.253	−12	42	50.22
18			.290			48.49
			2.272			49.36

No. 2570.

1902.	h	m	s	°	′	″
Nov. 21		15	2.515	−8	18	47.69
24			.529			47.76
			2.522			47.73

No. 2571.

1902.	h	m	s	°	′	″
Sep. 22		15	41.091	−9	15	27.31
26			.100			27.27
			41.096			27.29

No. 2572.

1902.	h	m	s	°	′	″
Sep. 29	22	16	16.085	−6	44	10.56
30			.186			10.85
			16.135			10.70

No. 2573.

1902.	h	m	s	°	′	″
Oct. 1		16	59.700	−11	20	29.79
2			.710			31.33
			59.705			30.56

No. 2574.

1901.	h	m	s	°	′	″
Nov. 4		17	29.405	−4	14	10.97
5			.349			10.05
			29.377			10.51

No. 2575.

1902.	h	m	s	°	′	″
Nov. 25		18	4.560	−15	26	30.68
26			.593			30.65
28			.654			29.66
			4.602			30.33

No. 2576.

1902.	h	m	s	°	′	″
Sep. 17		18	23.783	−7	41	24.01
18			.765			24.76
			23.774			24.38

No. 2577.

1902.	h	m	s	°	′	″
Sep. 22		18	56.621	−10	41	35.69
26			.657			35.13
			56.639			35.41

No. 2578. 50 Aquar.

1902.	h	m	s	°	′	″
Sep. 29		19	12.156	−14	1	33.90
30			.178			34.71
Oct. 1			.139			34.38
2			.186			34.20
3			.189			33.95
15			.164			34.42
Nov. 21			.130			34.31
24			.155			34.50
			12.162			34.30
Mean φ (8)				37	20	25.80

No. 2579.

1902.	h	m	s	°	′	″
Nov. 4		19	15.102	−18	5	22.50
6			14.975			21.94
			15.039			22.22

No. 2580.

1902.	h	m	s	°	′	″
Nov. 25		21	0.341	−5	40	33.53
26			.407			32.17
28			.404			32.51
			0.384			32.74

No. 2581.

1902.	h m s	° ′ ″
Oct. 3	22 21 10.550	− 3 17 6.17
15	.636	5.76
	10.593	5.96

No. 2582.

1901.		
Nov. 4	21 26.191	− 11 43 53.70
5	.201	53.56
	26.196	53.63

No. 2583.

1902.		
Sep. 17	21 36.761	− 11 50 53.00
18	.821	52.51
	36.791	52.75

No. 2584.

1902.		
Nov. 4	21 37.651	− 9 0 34.10
6	.655	34.84
	37.653	34.47

No. 2585.

1902.		
Sep. 29	22 44.689	− 6 24 19.60
30	.669	20.42
	44.679	20.01

No. 2586.

1902.		
Sep. 22	23 36.822	− 16 39 9.16
26	.841	9.15
	36.832	9.15

No. 2587.

1902.		
Oct. 1	24 8.169	− 10 9 49.52
2	.253	50.34
	8.211	49.93

No. 2588.

1902.		
Oct. 3	24 18.410	− 4 41 21.84
15	.423	21.26
	18.417	21.55

No. 2589.

1901.		
Nov. 4	24 43.948	− 13 25 19.59
5	.896	19.00
	43.922	19.29

No. 2590.

1902.		
Sep. 17	25 2.285	− 15 5 12.17
18	.332	12.49
	2.308	12.33

No. 2591.

1902.	h m s	° ′ ″
Nov. 4	22 25 21.478	− 5 19 12.74
6	.501	13.63
	21.490	13.18

No. 2592.

1902.		
Nov. 21	25 23.803	− 8 37 1.46
24	.788	1.70
	23.796	1.58

No. 2593. σ Aquar.

1902.		
Sep. 22	25 27.710	− 11 10 46.47
26	.720	46.02
Nov. 25	.728	46.48
26	.701	46.50
Dec. 1	.774	46.67
	27.727	46.43
Mean φ (5)		37 20 26.46

No. 2594.

1902.		
Sep. 29	26 9.992	− 7 3 18.46
30	10.013	18.94
	10.003	18.70

No. 2595.

1902.		
Oct. 1	26 14.471	− 3 24 47.65
2	.530	48.64
	14.500	48.14

No. 2596.

1901.		
Nov. 4	28 53.784	− 10 7 9.27
5	.707	8.81
	53.746	9.04

No. 2597.

1902.		
Sep. 17	29 12.156	− 15 37 26.02
18	.082	26.00
	12.119	26.01

No. 2598.

1902.		
Sep. 22	30 16.983	− 2 45 48.62
26	.961	48.37
	16.972	48.50

No. 2599.

1902.		
Sep. 29	30 50.750	− 16 53 40.99
30	.746	41.60
	50.748	41.30

No. 2600.

1902.	h m s	° ′ ″
Oct. 1	22 31 54.339	− 12 14 19.95
2	.449	20.11
	54.394	20.03

No. 2601.

1902.		
Nov. 4	32 11.596	− 6 34 30.34
6	.623	31.28
	11.610	30.81

No. 2602.

1901.		
Nov. 4	32 37.543	− 13 53 4.17
5	.525	2.95
	37.534	3.56

No. 2603. κ Aquar.

1902.		
Sep. 17	32 40.939	− 4 44 0.98
18	.875	0.90
Oct. 3	.839	1.33
15	.879	1.30
31	.904	0.64
Nov. 25	.868	1.23
26	41.005	1.17
Dec. 1	40.846	1.21
	40.894	1.10
Mean φ (8)		37 20 26.30

No. 2604.

1902.		
Nov. 21	33 13.762	− 8 24 25.04
24	.735	25.60
	13.748	25.32

No. 2605.

1902.		
Sep. 22	33 21.032	− 14 34 35.89
26	.022	35.88
	21.027	35.88

No. 2606.

1902.		
Sep. 29	34 6.697	− 10 32 15.73
30	.724	16.22
	6.710	15.98

No. 2607.

1901.		
Nov. 4	36 11.111	− 12 44 48.71
5	.054	48.08
	11.083	48.39

No. 2608.

1902.		
Sep. 17	37 0.130	− 5 36 47.20
18	.112	46.57
	0.121	46.88

No. 2609.

1902.	h	m	s	°	′	″
Sep. 22	22	37	51.219	− 9	39	59.24
26			.280			60.11
			51.250			59.67

No. 2610.

1902.						
Sep. 29		37	54.035	− 3	11	44.59
30			.173			[64.28]
Nov. 21			.123			45.01
			54.110			44.80

No. 2611. 67 Aquar.

1902.						
Oct. 1		38	7.239	− 7	28	....
2			.232			34.17
Nov. 25			.270			34.00
Dec. 1			.217			33.46
			7.240			33.88
Mean φ (3)				37	20	26.18

No. 2612.

1902.						
Oct. 15		38	17.607	−16	39	3.07
31			.591			1.37
			17.599			2.22

No. 2613.

1902.						
Nov. 4		39	8.465	−15	11	24.76
6			.468			25.53
			8.466			25.14

No. 2614.

1901.						
Nov. 4		40	12.224	−13	31	35.43
5			.240			35.45
			12.232			35.44

No. 2615.

1902.						
Sep. 22		40	57.088	−12	3	15.37
26			.089			15.73
			57.088			15.55

No. 2616.

1902.						
Sep. 17		41	4.466	−11	40	52.54
18			[.330]			53.05
Nov. 21			.433			52.44
			4.450			52.68

No. 2617.

1902.						
Sep. 29		42	8.669	− 3	13	30.38
30			.605			30.61
			8.637			30.50

No. 2618.

1902.	h	m	s	°	′	″
Oct. 1	22	42	15.596	− 7	14	49.11
2			.601			49.47
			15.598			49.29

No. 2619.

1902.						
Oct. 3		42	26.988	− 2	18	18.51
15			27.015			19.17
31			.063			18.21
			27.022			18.63

No. 2620.

1902.						
Nov. 4		42	30.719	−14	34	23.38
6			.621			23.94
			30.670			23.66

No. 2621.

1902.						
Nov. 21		43	12.204	− 6	17	5.61
24			.280			6.60
			12.242			6.10

No. 2622.

1902.						
Nov. 25		43	15.231	− 8	37	47.02
Dec. 1			.248			46.61
			15.239			46.82

No. 2623.

1901.						
Nov. 4		43	17.648	−11	4	42.79
5			.698			43.21
			17.673			43.00

No. 2624.

1902.						
Sep. 17		43	25.877	− 5	5	34.39
18			.862			34.35
			25.870			34.37

No. 2625. τ Aquar.

1902.						
Sep. 22		44	24.269	−14	6	35.62
26			.256			35.65
			24.263			35.63
Mean φ (2)				37	20	26.30

No. 2626.

1902.						
Sep. 29		45	23.306	−13	12	34.43
30			.352			35.44
			23.329			34.94

No. 2627.

1902.						
Oct. 1		45	40.625	− 1	5	49.09
2			.619			49.67
			40.622			49.38

No. 2628.

1902.	h	m	s	°	′	″
Oct. 15	22	46	4.293	− 9	50	38.87
31			.329			38.92
			4.311			38.90

No. 2629. λ Aquar.

1901.						
Nov. 4		47	26.998	− 8	6	23.09
5			.993			23.01
			26.996			23.05
Mean φ (2)				37	20	25.76
1902.						
Sep. 3			30.112			4.10
4			.149			4.59
11			.164			3.99
12			.199			3.67
Nov. 4			.203			4.11
6			.137			4.48
21			.144			4.01
24			.091			4.34
			30.150			4.16
Mean φ (8)				37	20	26.17

No. 2630.

1902.						
Sep. 17		47	36.529	−10	34	46.61
18			.458			46.54
			36.493			46.58

No. 2631.

1902.						
Sep. 22		47	36.744	− 3	8	47.56
26			.686			47.34
			36.715			47.45

No. 2632.

1902.						
Nov. 25		48	19.203	−12	8	16.28
Dec. 1			.192			15.90
			19.198			16.09

No. 2633.

1902.						
Sep. 29		48	22.572	− 6	30	28.28
30			.521			28.65
			22.547			28.46

No. 2634.

1902.						
Oct. 1		48	57.028	−12	42	38.97
2			.031			39.43
			57.030			39.20

No. 2635.

1902.						
Oct. 15		49	15.850	− 1	34	11.23
31			16.001			10.93
			15.925			11.08

No. 2636.

1902.	h	m	s	°	′	″
Nov. 4	22	49	28.048	− 7	43	31.89
6			27.963			33.10
			28.006			32.50

No. 2637.

1901.	h	m	s	°	′	″
Nov. 4		50	56.338	− 14	4	59.46
5			.349			59.41
			56.343			59.44

No. 2638.

1902.	h	m	s	°	′	″
Sep. 17		51	18.924	− 15	30	45.44
18			.845			44.69
			18.884			45.06

No. 2639.

1902.	h	m	s	°	′	″
Sep. 22		51	41.152	− 10	47	9.13
26			.106			8.84
			41.129			8.98

No. 2640.

1902.	h	m	s	°	′	″
Sep. 29		52	3.216	− 3	46	9.18
30			.231			9.37
			3.223			9.27

No. 2641.

1902.	h	m	s	°	′	″
Oct. 1		52	12.881	− 5	20	1.66
2			.851			2.13
			12.866			1.89

No. 2642.

1902.	h	m	s	°	′	″
Oct. 15		52	58.464	− 11	39	22.12
31			.536			22.27
			58.500			22.20

No. 2643.

1902.	h	m	s	°	′	″
Nov. 4		53	4.199	− 6	12	36.98
6			.151			37.13
			4.175			37.05

No. 2644.

1902.	h	m	s	°	′	″
Nov. 21		53	12.614	− 2	55	10.35
24			.679			9.93
			12.646			10.14

No. 2645.

1901.	h	m	s	°	′	″
Nov. 4		53	49.979	− 8	44	37.58
5			.939			37.47
			49.959			37.52

No. 2646.

1902.	h	m	s	″	′	°
Sep. 17	22	54	26.102	− 13	35	46.14
18			.011			46.17
			26.057			46.15

No. 2647.

1902.	h	m	s	°	′	″
Sep. 22		55	12.861	− 9	24	19.67
26			.914			19.58
			12.888			19.62

No. 2648. 8 Pisc.

1901.	h	m	s	°	′	″
Nov. 7		55	33.303	− 0	20	45.29
8			.346			44.49
12			.303			44.72
13			.306			44.60
			33.314			44.78
Mean φ (4)				37	20	25.79
1902.						
Sep. 29			36.379			25.96
30			.430			25.43
Oct. 29			.396			25.90
			36.402			25.76
Mean φ (3)				37	20	25.90

No. 2649.

1902.	h	m	s	°	′	″
Oct. 1		56	0.866	− 10	4	39.83
2			.869			40.20
			0.867			40.01

No. 2650.

1902.	h	m	s	°	′	″
Oct. 15		56	14.415	− 14	47	48.18
31			.435			48.53
			14.425			48.35

No. 2651.

1902.	h	m	s	°	′	″
Nov. 4		56	27.442	− 5	14	17.92
6			.451			18.89
			27.446			18.40

No. 2652.

1902.	h	m	s	°	′	″
Nov. 21		56	52.577	− 3	12	44.54
24			.362			44.70
			52.470			44.62

No. 2653.

1902.	h	m	s	°	′	″
Nov. 25		57	24.170	− 11	47	32.52
Dec. 1			.202			32.81
			24.186			32.67

No. 2654.

1901.	h	m	s	°	′	″
Nov. 4		57	24.205	− 7	6	20.54
5			.201			19.70
			24.203			20.12

No. 2655.

1902.	h	m	s	°	′	″
Sep. 17	22	58	7.213	− 0	57	8.89
18			.192			8.61
			7.203			8.75

No. 2656.

1901.	h	m	s	°	′	″
Nov. 7		58	47.880	− 5	19	45.17
8			.922			45.46
			47.901			45.31

β Pisc.

1902.	h	m	s	°	′	″
Sep. 3		58	53.377	+ 3	17	33.05
4			.339			32.75
11			.392			33.14
12			.339			32.93
			53.362			32.97
Mean φ (4)				37	20	25.99

No. 2657.

1901.	h	m	s	°	′	″
Nov. 12		59	12.608	− 2	26	2.05
13			.599			1.90
			12.603			1.97

No. 2658.

1902.	h	m	s	°	′	″
Sep. 22		59	21.773	− 12	42	25.24
26			.806			25.54
			21.790			25.39

No. 2659.

1902.	h	m	s	°	′	″
Oct. 15	23	0	3.209	− 8	13	21.99
31			.197			22.09
			3.203			22.04

No. 2660.

1902.	h	m	s	°	′	″
Nov. 4		0	16.841	+ 0	46	44.40
6			.806			43.46
			16.823			43.93

No. 2661.

1901.	h	m	s	°	′	″
Nov. 4		0	43.179	− 10	58	19.07
5			.206			18.91
			43.193			18.99

No. 2662.

1901.	h	m	s	°	′	″
Nov. 7		1	47.358	− 13	15	45.49
8			.414			45.50
			47.386			45.50

No. 2663.

1902.	h	m	s	°	′	″
Sep. 29		2	10.779	− 9	20	38.28
30			.817			38.39
			10.798			38.34

No. 2664.

1901.	h m s	° ′ ″
Nov. 12	23 2 13.445	−12 20 30.40
13	.464	30.75
	13.454	30.58

No. 2665.

1902.		
Oct. 2	2 44.220	− 0 49 34.16
29	.259	33.88
	44.240	34.02

No. 2666.

1902.		
Nov. 21	2 46.149	− 6 13 40.20
24	.148	40.20
	46.148	40.20

No. 2667. A. Pisc.

1902.		
Sep. 17	3 39.779	+ 1 35 39.47
18	.823	39.70
Nov. 25	.770	39.53
26	.754	39.39
Dec. 1	.767	39.77
2	.701	38.97
6	.786	39.24
	39.769	39.44
Mean φ (7)		37 20 26.26

No. 2668.

1902.		
Nov. 4	4 1.348	− 2 59 0.81
6	.420	2.50
	1.384	1.65

No. 2669.

1901.		
Nov. 4	4 30.279	− 4 29 55.79
5	.324	55.43
	30.302	55.61

No. 2670.

1901.		
Nov. 7	5 8.713	−14 10 56.53
8	.740	56.99
	8.726	56.76

No. 2671.

1901.		
Nov. 12	5 15.281	− 8 20 43.45
13	.287	43.87
	15.284	43.66

No. 2672.

1902.		
Sep. 29	5 35.159	− 6 29 32.06
30	.098	31.27
	35.128	31.67

No. 2673.

1902.	h m s	° ′ ″
Oct. 2	23 6 22.324	−11 2 26.83
29	.408	26.52
	22.366	26.68

No. 2674.

1902.		
Oct. 15	6 39.562	− 1 40 1.06
31	.595	39 59.85
	39.579	40 0.45

No. 2675.

1902.		
Nov. 4	6 52.307	−12 27 56.52
6	.329	57.34
	52.318	56.93

No. 2676.

1902.		
Nov. 21	7 52.271	−10 6 11.41
24	.249	12.12
	52.260	11.76

No. 2677.

1902.		
Nov. 25	7 59.034	− 0 30 7.95
Dec. 1	.024	7.55
	59.029	7.75

No. 2678.

1901.		
Nov. 7	9 0.815	− 3 10 24.06
8	.840	24.95
	0.828	24.50

No. 2679. φ Aquar.

1901.		
Nov. 4	9 11.710	− 6 34 57.88
5	.730	58.27
	11.720	58.08
Mean φ (2)		37 20 25.88
1902.		
Sep. 3	14.839	39.53
4	.850	38.94
11	.827	39.31
12	.852	38.39
Dec. 12	.872	39.20
13	.801	39.53
	14.840	39.15
Mean φ (6)		37 20 26.68

No. 2680.

1901.		
Nov. 12	9 30.629	−11 13 38.16
13	.650	38.25
	30.639	38.20

No. 2681.

1902.	h m s	° ′ ″
Sep. 29	23 10 14.291	−12 5 55.87
30	.268	56.79
	14 280	56.33

No. 2682.

1902.		
Oct. 2	10 16.724	− 5 4 2.88
29	.790	2.95
	16.757	2.91

No. 2683.

1902.		
Oct. 15	10 31 357	− 4 1 50.01
31	.454	50.05
	31.405	50.03

No. 2684.

1902.		
Nov. 4	10 38.290	+ 0 46 30.67
6	.303	29.50
	38.296	30.08

No. 2685.

1902.		
Nov. 21	10 44.570	−13 43 5.52
24	.579	4.83
	44.575	5.17

No. 2686.

1902.		
Dec. 2	10 45.391	− 9 37 18.48
6	.518	18.61
	45.454	18.54

No. 2687.

1902.		
Nov. 25	10 56.184	− 1 57 29.90
Dec. 1	.187	29.84
	56.185	29.87

No. 2688.

1901.		
Nov. 4	11 43.074	− 8 15 59.67
5	.018	59.32
	43.046	59.50

No. 2689. γ Pisc.

1901.		
Nov. 7	12 2.041	+ 2 44 29.01
8	.024	29.20
	2.032	29.10
Mean φ (2)		37 20 25.78

No. 2690.

1901.		
Nov. 12	12 30.028	−12 15 14.11
13	.071	14.12
	30.050	14.11

No. 2691.

1902.	h m s	° ′ ″
Sep. 29	23 12 48.683	− 9 43 3.96
30	.650	3.30
	48.667	3.63

No. 2692.

1902.		
Oct. 2	13 19.195	− 0 0 39.15
29	.272	39.29
	19.234	39.22

No. 2693.

1902.		
Oct. 15	13 24.978	− 2 25 54.16
31	.915	53.97
	24.947	54.07

No. 2694. ψ 3 Aquar.

1902		
Nov. 4	13 51.824	− 10 8 47.59
6	.864	48.21
26	.888	47.46
	51.859	47.75
Mean φ (3)		37 20 25.78

No. 2695.

1902.		
Nov. 21	13 55.467	− 12 42 23.58
24	.385	24.13
	55.426	23 86

No. 2696.

1902.		
Sep. 3	14 19.175	− 5 39 36.09
4	.143	36 00
	19.159	36.04

No. 2697.

1901.		
Nov. 7	15 7.886	− 4 27 28.97
8	.961	29.86
	7 924	29.42
1902.		
Sep. 11	11 073	9.68
12	.070	9.89
	11.071	9.78

No. 2698.

1901.		
Nov. 12	15 34 684	− 6 26 54.87
13	.769	54.63
	34.726	54.75
1902.		
Dec. 12	37.731	35.42
13	.727	35.82
	37.729	35.62

No. 2699.

1902.		
Sep. 29	15 46.777	− 11 4 8.39
30	.736	7.86
	46.756	8.12

No. 2700.

1902.	h m s	° ′ ″
Oct. 2	23 16 6.794	− 9 12 39.78
29	.787	39.21
	6.790	39.50

No. 2701.

1902.		
Nov. 25	16 10.995	+ 1 39 41.04
Dec. 1	.989	40.78
	10.992	40.91

No. 2702.

1902.		
Sep. 4	16 10.534	− 7 33 35.53
Oct. 15	.557	35.53
31	.579	35.40
	10.557	35.49

No. 2704.

1902.		
Nov. 21	16 45.126	− 12 59 10.59
24	.056	10.17
	45.091	10.38

No. 2703.

1902.		
Nov. 4	16 45.630	− 10 17 54.13
6	.575	54.83
26	.553	54.45
	45.586	54.47

No. 2705.

1902.		
Dec. 2	17 52.840	+ 2 16 51.80
6	.933	52.30
	52.886	52.05

No. 2706.

1901.		
Nov. 4	17 53.118	− 11 18 52.53
5	.172	51.30
	53.145	51.91

No. 2707.

1901.		
Nov. 7	18 9.223	− 9 55 41.50
8	.256	41.60
	9.240	41.55

No. 2708.

1902.		
Nov. 25	18 20.526	− 3 45 8.89
Dec. 1	.511	8.90
	20.519	8.90

No. 2709.

1901.		
Nov. 12	18 27.210	− 0 15 8.81
13	.229	8.10
	27.220	8.45

No. 2710.

1902.	h m s	° ′ ″
Sep. 29	23 18 42.189	− 1 25 13.09
30	.139	13.14
	42.164	13.12

No. 2711.

1902.		
Oct. 2	19 1.140	− 8 5 20.19
29	.207	19.29
	1.174	19.74

No. 2712.

1902.		
Oct. 15	19 16.631	+ 3 10 41.90
31	.608	42.69
	16.620	42.30

f.

1902.		
Sep. 11	19 44.820	− 5 35 3.74
12	.739	2.65
	44.780	3.20

No. 2713.

1901.		
Nov. 4	21 27.247	− 7 9 5.70
5	.240	5.87
	27.243	5.79
1902.		
Sep. 3	30.306	8 45.92
4	.325	46.38
	30.316	46.15

No. 2714.

1901.		
Nov. 7	21 28.151	− 10 34 43.45
8	.155	43.53
	28.153	43.49

No. 2715.

1902.		
Sep. 11	21 [35.60]	− 5 46 17.88
12	.729	18.37
Nov. 25	.730	17.34
Dec. 13	.700	18.34
	35.720	17.98

No. 2716.

1902.		
Dec. 2	21 43.270	+ 1 56 19.93
6	.305	19.65
	43.288	19.79

No. 2717. κ Pisc.

1901.		
Nov. 12	21 51 469	+ 0 42 48.99
13	.447	48.90
	51.458	48.95
Mean φ (2)		37 20 26.14

No. 2717. κ Pisc. (*Con.*)

1902.	h m s	° ′ ″
Sep. 29	23 21 54.545	+ 0 43 9.23
30	.515	8.81
Oct. 2	.569	8.31
29	.515	8.50
Nov. 21	.554	9.56
24	.580	9.56
	54.546	9.00
Mean φ (6)		37 20 25.56

No. 2718.

1902.		
Oct. 15	22 11.355	− 3 10 26.36
31	.468	25.76
	11.411	26.06

No. 2719.

1902.		
Nov. 4	22 59.288	− 11 59 19.71
26	.265	19.88
	59.276	19.80

No. 2720.

1902.		
Nov. 21	23 52.860	− 7 56 29.57
24	.887	29.07
	52.873	29.32

No. 2721.

1902.		
Dec. 2	23 56.530	− 9 48 19 31
6	.577	19.51
	56.553	19.41

No. 2722.

1902.		
Nov. 25	24 25.251	− 2 19 49.66
Dec. 1	.144	50.43
	25.198	50.04

No. 2723.

1901.		
Nov. 4	24 24.997	− 5 4 19.59
5	25.008	19.52
	25.003	19.56
1902.		
Sep. 3	28.079	4 0.87
4	.145	3 59.67
	28.112	4 0.27

No. 2724.

1901.		
Nov. 7	24 25.717	− 1 34 50.27
8	.722	50.70
	25.720	50.48

No. 2725.

1901.		
Nov. 12	25 36.509	+ 0 19 54.47
13	.522	54.39
	36.515	54.43

No. 2726.

1902.	h m s	° ′ ″
Sep. 11	23 25 57.910	− 6 49 40.13
12	.913	40.34
	57.911	40.23

No. 2727.

1902.		
Sep. 29	26 5.518	+ 1 49 27.66
30	.551	26.91
	5.534	27.28

No. 2728.

1902.		
Oct. 15	26 42.269	− 8 52 8.97
31	.180	7.94
	42.224	8.45

No. 2729.

1902.		
Nov. 4	27 21.279	− 11 32 23.82
26	.253	23.52
	21.266	23.67

No. 2730.

1901.		
Nov. 4	27 50.105	− 3 33 47.09
5	.103	46.93
	50.104	47.01

No. 2731.

1901.		
Nov. 7	27 51.136	+ 2 50 6.18
8	.232	6.15
	51.184	6.17

No. 2732.

1902.		
Sep. 3	28 25.799	− 4 56 34.42
4	.843	32.41
	25.821	33.41

No. 2733.

1901.		
Nov. 12	28 36.414	− 2 47 27.23
13	.455	27.17
	36.434	27.20

No. 2734.

1902.		
Sep. 29	29 6.707	− 1 47 [24.30]
30	.689	19.42
Nov. 21	.742	19.40
	6.713	19.41

No. 2735.

1902.		
Oct. 2	29 24.645	+ 4 55 44.88
29	.696	44.90
	24.670	44.89

No. 2736.

1902.	h m s	° ′ ″
Oct. 15	23 30 23.420	− 11 5 48.07
31	.422	48.53
	23.421	48.30

No. 2737.

1902.		
Nov. 4	30 27.910	+ 0 46 19.17
26	.953	19.61
	27.931	19.39

No. 2738. M 1003.

1902.		
Nov. 25	30 28.766	− 8 0 24.50
Dec. 1	.818	24.48
12	.831	25.16
	28.805	24.71
Mean φ (3)		37 20 26.14

No. 2739.

1902.		
Nov. 21	30 44.077	− 6 17 26.56
24	.064	26.64
	44.070	26.60

No. 2740.

1901.		
Nov. 4	30 53.688	− 9 18 46.77
5	.724	46.40
	53.706	46.58

No. 2741.

1901.		
Nov. 7	31 2.223	+ 2 36 18.50
8	.232	18.31
	2.228	18.41

No. 2742.

1902.		
Dec. 2	31 23.244	+ 1 33 30.32
6	.214	29.71
	23.229	30.01

No. 2743.

1901.		
Nov. 12	33 5.276	− 4 18 27.08
13	.305	27.11
	5.290	27.09

No. 2744.

1902.		
Sep. 29	33 8.863	− 9 10 11.20
30	.791	11.26
	8.827	11.23

No. 2745.

1902.		
Nov. 25	34 43.322	− 1 16 58.69
Dec. 8	.284	59.26
12	.240	60.45
	43.282	59.47

No. 2746.

1901.	h	m	s	°	′	″
Nov. 7	23	34	45.112	− 6	5	41.80
8			.171			41.80
			45.141			41.80

1902. **No. 2747. ι Pisc.**

Oct. 2		34	54.609	+ 5	5	42.85
29			.606			41.99
			54.608			42.42
Mean φ (2)				37	20	25.11

1902. **No. 2748.**

Oct. 15		35	17.849	+ 4	15	46.52
31			.852			47.01
			17.850			46.77

1902. **No. 2749.**

Nov. 4		35	39.613	− .0	7	36.57
26			.585			35.95
			39.599			36.26

1902. **No. 2750.**

Nov. 21		35	45.368	− 8	27	23.11
24			.345			23.41
			45.357			23.26

1902. **No. 2751.**

Dec. 2		35	50.517	+ 3	5	2.83
6			.507			2.19
			50.512			2.51

1901. **No. 2752.**

Nov. 12		36	4.401	− 7	1	34.72
13			.415			34.60
			4.408			34.66

1902. **No. 2753.**

Sep. 29		36	11.781	− 3	24	7.65
30			.706			8.00
			11.743			7.82

1901. **No. 2754. λ Pisc.**

Nov. 4		36	59.687	+ 1	14	6.60
5			.684			6.66
			59.685			6.63
Mean φ (2)				37	20	25.78
1902.						
Sep. 3		37	2.735			26.78
4			.706			27.26
11			.771			26.45
12			.703			24.99
Dec. 13			.714			27.07
			2.726			26.51
Mean φ (5)				37	20	26.12

No. 2755.

1902.	h	m	s	°	′	″
Nov. 21	23	37	19.907	− 2	2	37.90
24			.857			38.14
			19.882			38.02

1901. **No. 2756.**

Nov. 7		39	27.602	− 3	43	27.96
8			.626			27.88
			27.614			27.92

1901. **No. 2757.**

Nov. 12		39	29.522	− 5	33	24.48
13			.544			24.94
			29.533			24.71

1902. **No. 2758.**

Sep. 29		39	45.041	− 7	28	49.01
30			.026			48.59
			45.034			48.80

1902. **No. 2759.**

Oct. 2		39	48.821	+ 6	38	52.83
29			.850			53.07
			48.835			52.95

1902. **No. 2760.**

Oct. 15		39	58.688	− 1	12	17.02
31			.608			16.05
			58.648			16.53

1901. **No. 2761.**

Nov. 4		41	19.987	+ 2	56	15.59
5			20.012			16.22
			19.999			15.90

1902. **No. 2762.**

Nov. 21		41	33.610	− 0	0	48.95
24			.657			48.90
			33.634			48.93

1901. **No. 2763.**

Nov. 7		42	33.878	− 5	0	43.29
8			.871			43.61
			33.874			43.45

1902. **No. 2764.**

Nov. 25		42	44.282	+ 3	41	8.46
Dec. 8			.320			7.97
12			.311			8.21
			44.304			8.21

No. 2765. 20 Pisc.

1901.	h	m	s	°	′	″
Nov. 12	23	42	51.169	− 3	18	42.95
13			.205			42.94
			51.187			42.95
Mean φ (2)				37	20	25.96
1902.						
Sep. 29			54.288			22.81
30			.276			22.86
Nov. 4			.294			23.22
26			.298			22.70
Dec. 2			.315			22.25
6			.287			22.85
			54.293			22.78
Mean φ (6)				37	20	25.73

1902. **No. 2766.**

Oct. 2		43	30.366	− 6	55	29.10
29			.401			29.38
			30.383			29.24

1902. **No. 2767.**

Oct. 15		43	48.332	+ 1	40	14.85
31			.354			14.45
			48.343			14.65

1902. **No. 2768.**

Nov. 21		44	26.379	+ 0	31	55.65
24			.373			54.79
			26.376			55.22

1901. **No. 2769.**

Nov. 4		45	10.687	+ 5	59	25.29
5			.678			25.53
			10.682			25.41

1901. **No. 2770.**

Nov. 7		46	40.357	− 6	13	48.12
8			.309			48.39
			40.333			48.26

1901. **No. 2771.**

Nov. 12		46	53.744	+ 2	22	48.58
13			.778			48.55
			53.761			48.56

1902. **No. 2772.**

Sep. 29		47	53.547	− 3	41	58.44
30			.548			58.78
			53.547			58.61

No. 2773. 25 Pisc.

1902.	h	m	s	°	′	″
Sep. 3	23	48	3.654	+ 1	32	44.93
4			.618			44.67
11			.594			44.43
12			.622			45.11
Oct. 15			.593			44.95
31			.629			44.57
Dec. 13			.599			44.88
			3.616			44.79
Mean φ (7)				37	20	26.26

No. 2774.

1902.						
Oct. 2		48	5.122	− 7	11	41.82
29			.188			41.32
			5.155			41.57

No. 2775.

1902.						
Nov. 21		49	4.456	+ 4	19	36.08
24			.340			36.45
			4.398			36.27

No. 2776.

1902.						
Nov. 4		49	18.196	+ 3	8	2.60
26			.187			2.88
			18.192			2.74

No. 2777.

1901.						
Nov. 4		49	34.270	− 2	29	48.74
5			.239			48.45
			34.254			48.59

No. 2778.

1901.						
Nov. 7		49	42.583	− 0	26	29.16
8			.606			28.83
			42.595			29.00

No. 2779.

1901.						
Nov. 12		50	3.097	− 5	13	7.94
13			.093			7.83
			3.095			7.88

No. 2780.

1902.						
Nov. 25		50	6.968	+ 6	31	34.38
Dec. 8			.967			33.69
12			.930			34.00
			6.955			34.02

No. 2781.

1902.						
Dec. 2		50	36.944	+ 7	40	40.99
6			.975			40.87
			36.960			40.93

No. 2782.

1902.	h	m	s	°	′	″
Sep. 29	23	51	46.105	+ 4	10	46.46
30			.125			46.53
			46.115			46.50

No. 2783.

1902.						
Oct. 2		52	5.039	+ 2	31	33.71
29			.068			33.26
			5.054			33.48

No. 2784. 27 Pisc.

1902.						
Sep. 3		53	39.340	− 4	5	59.38
4			.394			59.11
11			.340			58.90
12			.358			58.79
Oct. 15			.372			58.72
31			.389			58.87
Nov. 21			.382			59.17
24			.408			58.97
Dec. 2			.391			58.53
6			.380			59.05
13			.408			59.23
			39.378			58.97
Mean φ (11)				37	20	26.43

No. 2785. ω Pisc.

1901.						
Nov. 7		54	13.625	+ 6	18	54.51
8			.643			54.24
18			.613			55.16
22			.641			55.19
			13.631			54.78
Mean φ (4)				37	20	26.03

No. 2786.

1901.						
Nov. 12		54	29.709	− 2	24	7.18
13			.726			7.25
			29.718			7.22

No. 2787.

1902.						
Nov. 4		54	39.065	− 6	26	13.94
26			38.997			14.18
			39.031			14.06

No. 2788.

1901.						
Nov. 4		54	42.216	− 0	49	51.09
5			.187			50.54
			42.202			50.82

No. 2789.

1902.						
Sep. 29		54	53.073	+ 5	24	43.46
30			.043			43.36
			53.058			43.41

No. 2790.

1902.	h	m	s	°	′	″
Oct. 2	23	55	33.141	+ 0	31	13.15
29			.111			13.59
			33.126			13.37

No. 2791.

1902.						
Nov. 21		55	37.700	− 0	19	21.91
24			.623			21.62
			37.661			21.76

No. 2792.

1902.						
Nov. 25		55	58.393	− 5	28	24.37
Dec. 12			.394			25.05
			58.393			24.71

No. 2793.

1901.						
Nov. 12		56	45.048	− 3	34	42.45
13			.051			42.73
			45.050			42.59

No. 2794. 30 Pisc.

1902.						
Sep. 3		56	56.078	− 6	33	31.13
4			.078			31.42
11			.040			31.22
12			.057			31.59
Oct. 15			.056			31.35
31			.011			31.71
Dec. 13			.086			32.20
			56.058			31.52
Mean φ (7)				37	20	26.50

No. 2795.

1901.						
Nov. 7		57	26.017	+ 7	56	7.80
8			.053			7.72
			26.035			7.76

No. 2796.

1901.						
Nov. 4		57	42.460	+ 1	34	52.23
5			.467			52.34
			42.463			52.29

No. 2797.

1902.						
Sep. 29		58	39.011	+ 3	21	42.18
30			38.984			41.86
			38.998			42.02

2 Ceti.

1902.						
Dec. 2		58	43.190	− 17	52	54.24
6			.187			53.41
			43.189			53.83
Mean φ (2)				37	20	26.00

No. 2798.

1902.						
Oct. 2		59	45.142	+ 0	59	30.56
29			.206			30.30
			45.174			30.43

CATALOGUE

OF

ZODIACAL STARS

FOR THE

EPOCH 1900.

THE CATALOGUE OF ZODIACAL STARS.

This catalogue contains the stars in the list, published in 1899 by Sir David Gill, as a working list for Heliometer measures of the Moon and planets. Some few changes were made in the original list, usually by introducing extra stars, to replace close doubles. In some cases the original star had been observed here, and both are included. In other cases the exigencies of the program did not permit extra observations, so that but one star has been observed. If the observing of that portion of the list had been completed at the time the change was announced, the extra star has not usually been observed.

With but one exception, a star of 9½ magnitude, all the stars of the list have been observed twice, fixed circle West. The Fundamental stars, which are included in the list itself, have been observed more frequently, but with no attempt at uniformity. The observations of the Newcomb Fundamental stars, which were made for the determination of the L. O. Fundamental stars, are not included in this catalogue.

But little explanation of the catalogue will be required. The numbers are those of the original list. Occasionally two will be reversed in order, since the accurate Right Ascensions require such change. Some extra stars are noted as Anonymous, meaning that they are not included in the original enumeration, though they may be found in other catalogues. The extra star is often one of a pair, not close enough to be classed as a double. There are also a few stars, from the Heliometer lists, which are not included in the general catalogue, and these are given the same letter or designation as that of the Heliometer list. The greater number of the stars, of which special observations were requested for the Heliometer observations, are included in the general catalogue. The earlier observations of these stars, made here, have been published in Volume VI. Those made in 1902 and 1903, the results of which were printed in L. O. Bulletin No. 43, have been incorporated here.

The earlier observations, made in the years 1898 and 1900, were reduced to different fundamental systems, neither of which is that of Newcomb. The corrections necessary to reduce those observations to the system of the Zodiacal Catalogue have been derived, and are given, with the corresponding places, in the section immediately following this catalogue. These observations will be of use in obtaining more precise places of nearly one hundred stars of the catalogue. These stars are noted with an asterisk (*) following the catalogue number.

The magnitude first noted is from Gill. When a second magnitude is recorded, it is the mean of the observed estimates, which were made to the nearest quarter. Often the estimate was only a confirmation of the list magnitude. For bright stars, above sixth magnitude, the estimate at time of observation has little value.

The mean epoch is given for observations taken near the same date. When observations are nearly a year apart, separate epochs have been given.

Newcomb's values of the Precession constants have been used in the reductions, and are given for each star. The constants for 1900 are: *m* $3^s.07234$, *n* $20''.0468$.

The number of observations for Right Ascension and Declination are usually the same. When they differ, the epoch applies to the larger number, but is very nearly the same for the incomplete series.

The Fundamental stars are designated as such in the notes. No proper motions have been applied in the reduction of these observations; but those of the Fundamental stars will be found in the table of adopted standard places, earlier in this volume. Some stars which occur in Newcomb's catalogue, but which were not so designated by Gill, are marked here, (Fund.), when not employed as standards in the reductions.

The notes usually contain some description of double stars, and of stars in pairs. Proper motions are given for some of the stars, taken usually from Porter, Bossert, or the Gesellschaft Zone Catalogues. No systematic search has been made, however, for recorded proper motions; and no attempt has been made to investigate new ones. When the comparisons made with other catalogues indicate a possible proper motion as great as $0^s.01$, or $0''.10$, the existence of proper motion has been questioned in the notes. The general results of these comparisons form a later section of this volume.

The observations of Right Ascension in this catalogue have not been corrected for magnitude equation. The determination of the effect, by direct measures, gives the following differential corrections, to reduce to the fifth magnitude as standard. The details of this determination are given in the preceding text of this volume.

Mag.	Corr.
4.0	+ $0^s.008$
5.0	0.000
6.0	— 0.008
7.0	— 0.016
8.0	— 0.024
9.0	— 0.032

No.	Mag.		Epoch.	R. A. 1900.0.			Precess.	Decl. 1900.0.				Precess.	Obs.		Notes.
				h	m	s	s		°	'	"	"			
1	4.6		1901.87	0	0	13.008	3.0722	−	6	16	1.00	+ 20.047	2	2	
2	7.8	7.8	02.81		0	18.326	.0722	−	4	24	27.35	.047	2	2	
3	8.2	8.2	02.87		1	0.658	.0723	−	0	26	6 69	.047	2	2	
4	8.0		01.85		1	11.498	.0721	−	1	47	38.72	.047	2	2	
5	8.5		01.84		1	54 896	.0733	+	4	43	54.34	.046	2	2	
6	7.8	7.8	01.89		1	56 701	.0736	+	6	19	10.13	.046	2	2	
7	6.4		02.87		2	36.743	.0715	−	3	6	19.71	.046	6	6	*Fund.*
8	6.3	6.6	02.87		3	4.870	.0714	−	3	0	15.78	.045	2	2	
9	8.5	8.3	01.87		3	14.416	.0733	+	2	53	5.90	.045	2	2	
10	7.3	7.5	02 92		3	44.839	.0724	+	0	8	8.49	.044	2	2	
11	8.0		01.84		4	47.239	.0744	+	4	16	32.48	.043	2	2	
12	5.9		01.85		5	11.721	.0693	−	5	48	16 08	.042	2	2	
13	7.8	7.8	01.89		5	33.370	.0732	+	1	29	54 61	.041	2	2	
14	6.8	6.8	02.81		6	2.459	.0700	−	3	52	38.87	.040	2	2	
15	7.5	7.5	02.89		6	7.713	.0770	+	7	23	31.21	.039	2	2	
16	7.0		01.87		7	32.636	.0710	−	1	47	0.77	.036	2	2	
17	8.5	8.5	02.87		8	32.306	.0776	+	6	1	28.50	.033	2	2	
18	7.8		01.84		8	54.098	.0683	−	4	27	52.06	.032	2	2	
19	7.2	7.1	02.92		9	29.022	.0731	+	0	44	28 10	.029	2	2	
20	8.0	8.0	01.89		9	42 601	.0715	−	0	51	31.81	.029	2	2	
21	6.2	6.6	02.89		9	49.728	.0807	+	8	15	57.02	.028	2	2	N. p. 8 Mag. fol.
22	7.8	7.3	01.87		10	30.280	.0780	+	5	17	16.61	.026	2	2	
23	7.0	7.1	02.81		10	49.316	.0764	+	3	41	44.46	.025	2	2	
24	6.1	6.3	02.92		11	25.745	.0813	+	7	41	5.76	.022	2	2	
25	7.5	7.4	02.87		11	31.803	.0739	+	1	17	40.72	.021	2	2	
26	7.0		01.84		12	15.379	.0828	+	8	19	7.62	.018	2	2	N. f. Red.
27	7.3		01.85		13	11.292	.0689	−	2	34	13 34	.014	2	2	
28	7.5	7.5	01.87		14	9.266	.0723	−	0	2	4.16	.009	2	2	
29	8.8	8.6	02.90		14	20.985	.0799	+	5	12	20.72	008	2	3	
30	8.0	7.9	02.81		15	1.622	.0762	+	2	28	43.54	.004	2	2	
31	8.0	7.8	02.92		15	13.574	.0789	+	4	13	26.17	.003	2	2	
32	5.6		01.87		15	27.086	.0844	+	7	38	5.69	.001	4	4	*Fund.*
			02.87			27.062					5.88		2	2	
33	8.0	8.0	02.89		16	6.268	.0660	−	3	52	6.23	19 998	2	2	Pr. Mo. (?)
34	8.5		01.85		16	51.038	.0835	+	6	27	25.45	.993	2	2	
35	7.0		01.87		17	8.103	.0623	−	5	44	46.92	.991	2	2	
36	7.7	7.7	01.89		18	30.523	.0764	+	2	11	18.82	.982	2	2	
37	8.3	8.3	02.81		18	33.267	.0703	−	1	5	43.55	.981	2	2	
38	6.0		01.84		19	23.107	.0669	−	2	46	20.39	.975	2	2	
39	5.8		01.85		20	16.577	.0752	+	1	23	9.42	.968	2	2	*Fund.*
			02.92			16.572					9.50		2	2	
40	7.3	7.1	01.87		20	32.559	.0873	+	7	8	18.12	.966	2	2	
41	8.3	8.5	02.87		21	4.636	.0736	+	0	36	38.11	.962	2	2	
42	7 4	7.3	02.89		21	8.192	.0794	+	3	16	19.01	.962	2	2	
43	8.5	8.1	02.92		21	9.804	.0843	+	5	32	26.95	.961	2	2	
44	6.2	6.2	01.89		21	29.677	.0710	−	0	36	12.70	.959	2	2	
45	8.0	8 0	02.81		21	42.811	.0918	+	8	45	55.67	.957	2	2	
46	7.7		01.84		22	12.308	.0774	+	2	15	38.70	.953	2	2	
47	6.5		01.85		23	9.835	.0952	+	9	38	31.01	.944	2	2	
48	7.1		01.87		24	32.000	.0639	−	3	23	32.68	.932	2	2	
49	7.7	7.9	02.92		24	43.590	.0701	−	0	52	26.89	.930	2	2	
50	7.8	7.6	02.81		24	47.425	.0681	−	1	40	6.27	.930	2	2	
51	6.2		01.89		24	56.159	.0609	−	4	30	35 56	.928	2	2	*Fund.*
			02.90			56.174					35.27		4	4	
52	7.0	7.0	02.89		25	0.149	.0833	+	4	18	24.96	.927	2	2	
53	7.5		01.84		26	27.434	.0956	+	8	36	32 44	.913	2	2	
54	8.3		01.85		26	48.617	.0749	+	0	57	28.35	.910	2	2	
55	5.7	6.0	02.92		27	14.143	.0901	+	6	24	11 63	.905	2	2	
56	7.8		01.87		28	46.005	.0804	+	2	46	6.80	.889	2	2	
57	6.8	6.8	01.89		28	59.771	.1013	+	9	45	6.39	.886	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
				h m s	s	° ′ ″	″			
58	8.5	8.5	1902.81	0 29 9.196	3.0636	− 2 56 47.14	+19.885	2	2	Pr. Mo. (?)
59	8.3	8.3	02.87	29 16.424	.0734	+ 0 27 4.48	.884	2	2	
60	7.8		01.84	30 19.981	.0839	+ 3 44 36.26	.871	2	2	
61	6.0		01.85	30 24.792	.0691	− 1 3 18.33	.871	2	2	
62	7.9	7.8	02.89	31 14.007	.0989	+ 8 19 26.84	.861	2	2	
63	8.2		01.87	31 47.656	.0881	+ 4 51 42.40	.854	2	2	
64	8.2	8.2	02.92	31 50.772	.0596	− 3 57 2.58	.854	2	2	
65	7.3	7.4	01.89	32 6.268	.1082	+10 53 9.99	.850	2	2	
66	6.8	6.8	02.81	32 21.527	.0808	+ 2 35 12.08	.847	2	2	
67	8.8	9.0	02.87	32 42.598	.0785	+ 1 50 38.33	.843	2	2	
68	8.2		01.84	33 40.684	.0737	+ 0 23 53.42	.831	2	2	
69	8.5	8.0	01.85	33 47.400	.0977	+ 7 21 56 88	.829	2	2	
70	7.3	7.4	02.89	34 28.037	.1112	+10 58 59.08	.821	2	2	
71	8.3	8.0	01.87	35 26.138	.0640	− 2 19 6.48	.808	2	2	
72	7.0	6.8	01.89	36 1.755	.1048	+ 8 48 31.96	.800	2	2	
73	7.3	7.6	02.81	37 14.149	.0860	+ 3 37 9.42	.783	2	2	
74	8.5	8.4	02.87	37 29.926	.0689	− 0 53 36.04	.779	2	2	
75	8.6	8.5	02.92	37 53.270	.1033	+ 8 1 33.24	.774	2	2	
76	7.8		01.84	38 9.299	.0781	+ 1 30 19.85	.770	2	2	
77	8.5	8.5	01.87	38 21.416	.0942	+ 5 36 24.29	.767	2	2	
78	6.8		01.85	40 1.888	.0712	− 0 17 33.80	.742	2	2	Pr. Mo. (?)
79	8.3	8.4	01.89	40 37.848	.0652	− 1 43 55.85	.733	2	2	
80	5.7	5.7	02.81	41 48.484	.1212	+11 25 42.51	.714	2	2	
81	7.0	7.2	02.87	42 30.698	.0600	− 2 52 5.61	.703	2	2	
82	7.7	7.6	02.89	42 59.501	.1104	+ 8 40 34.19	.695	2	2	
83	8.5	8.4	02.92	43 4.995	.0819	+ 2 11 1.23	.694	2	2	
84	9.0	9.0	02.93	43 5.330	.1151	+ 9 42 47.19	.694	2	2	
85	6.0		01.84	43 6.077	.1019	+ 6 45 14.28	.693	2	2	
86	5.7		01.85	43 8.303	.0932	+ 4 45 57.63	.693	2	2	Pr. Mo. +^{s}.050 −1″.15
87	4.6		01.87	43 29 640	.1035	+ 7 2 26.98	.687	2	2	*Fund.*
			02.97	29.617		26.98		2	2	
88	7.0	7.0	01.89	44 47.726	.0689	− 0 46 8.74	.665	2	2	
89	8.6	8.4	02.90	44 58.818	.1243	+11 17 11.64	.662	4	3	
90	8.5	8.3	02.87	45 20.988	.1180	+ 9 52 1.20	.656	2	2	
Anon.		8.5	02.96	45 47.683	.1252	+11 18 12.17	.650	1	1	follows No. 89
91	6.2	6.4	02.89	46 9.307	.0856	+ 2 50 33.40	.641	2	2	
92	8.3	8.4	02.92	46 18.131	.0741	+ 0 22 0 06	.639	2	2	
93	8.8	9.5	02.95	46 20.037	.0810	+ 1 50 52.59	.638	1	1	
94	7.0		01.84	46 20 708	.1306	+12 14 28.10	.638	2	2	
Anon.		8.5	01.85	46 28.213	.0888	+ 3 28 42.27	.636	1	1	
95	8.0	7.5	01.92	46 46.685	.0890	+ 3 30 59.15	.631	2	2	
96	8.3	8.3	01.87	46 54.748	.1205	+10 3 27.97	.628	2	2	Mean: dup.
97	7.3	7.3	01.89	47 14.576	.1360	+13 6 20.00	.623	2	2	
98	8.5	8.4	02.81	47 20.749	.1115	+ 8 7 20.41	.621	2	2	
99	8.3	8.3	02.87	47 34.963	.1173	+ 9 15 40.28	.616	2	2	
100	5.0		02.94	47 53.839	.0642	− 1 41 14.35	.611	4	4	*Fund.*
101	8.4	8.4	02.92	48 37.384	.1249	+10 34 47.95	.598	2	2	
102	8.1	8.2	02.97	48 47 817	.0984	+ 5 15 57.72	.594	4	4	
103	7.8	8.5	01.84	49 33.091	.1172	+ 8 53 13.27	.580	2	2	S. f. dup. 3″
104	8.2	8.0	01.85	49 46.463	.1351	+12 18 19.72	.576	2	2	
105	6.5	6.5	01.89	50 54.307	.1425	+13 24 36.85	.554	2	2	
106	8.8		01.87	51 14.851	.1363	+12 10 19.30	.548	2	2	
106*a*	8.2	8.0	02.97	51 20.636	.1177	+ 8 41 18.15	.546	2	2	
107	8.7	8.4	02.81	51 33.598	.1221	+ 9 28 29.23	.542	2	2	
108	7.5	7.5	02.87	52 5.681	.0713	− 0 11 54.94	.531	2	2	
109	8.2	8.0	02.89	52 7.400	.1358	+11 53 20.53	.531	2	2	
110	7.0	7.0	02.92	52 31.442	.0789	+ 1 14 40.47	.522	2	2	
111	6.0	6.2	02.93	52 39.559	.1435	+13 9 19.14	.520	2	2	
112	8.2		01.84	52 46.604	.1102	+ 7 4 14.69	.518	2	2	
114	7.3		01.87	53 8.209	.1063	+ 6 18 14.71	.510	2	2	

No.	Mag.	Epoch.	R. A. 1900.0	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
113	8.2 8.0	1901.85	0 53 9.092	3.0925	+ 3 45 22.88	+19.510	2	2	
115	7.7	01.89	54 13.558	.0657	− 1 12 49.92	.488	2	2	
116	8.5 8.5	02.81	54 28.439	.1512	+14 4 12.91	.483	2	2	
117	7.5 7.7	02.87	54 57.065	.0839	+ 2 5 37.85	.473	2	2	
118	7.4 7.1	02.89	55 34.133	.0600	− 2 11 49.46	.460	2	2	
119	8.2 8.2	02.92	56 0.112	.1331	+10 38 32.82	.451	2	2	
120	8.5 8.5	02.93	56 21.703	.0985	+ 4 35 47.60	.444	2	2	
121	8.5 8.7	01.84	56 43.317	.1274	+ 9 33 5.45	.436	2	2	S. p. dup.
122	8.5	01.85	57 18.156	.1530	+13 42 51.46	.423	2	2	
123	7.2	01.87	57 29.468	.1225	+ 8 35 45.95	.420	2	2	
124	4.5	01.96	57 45.129	.1153	+ 7 21 6.71	.414	2	2	*Fund.*
		02.81	45.115		6.73		2	2	
		03.01	45.142		6.86		2	2	
125	7.8 7.9	01.89	57 51.031	.1464	+12 30 43.27	.412	2	2	
126	8.7 8.5	02.87	58 35.262	.1528	+13 24 0.56	.395	2	2	
127	6.0	01.84	58 40.245	.0772	+ 0 49 51.14	.394	2	2	*Fund.*
128	8.2 8.2	02.92	59 10.028	.0728	+ 0 4 44.60	.382	2	2	
129	7.8 7.8	02.96	59 37.857	.1116	+ 6 30 44.28	.372	3	3	
130	6.4 6.4	02.89	59 41.710	.1032	+ 5 7 13.59	.371	2	2	
131	6.0	02.97	59 48.531	.1609	+14 24 30.00	.368	2	2	*Fund.*
132	6.7	01.85	1 0 38.763	.0990	+ 4 22 32.98	.349	2	2	S. p. 2^{s}.1
133	7.7	01.87	0 39.191	.1650	+14 50 55.41	.349	2	2	
134	8.0 7.8	01.89	0 56.288	.0891	+ 2 44 23.11	.343	2	2	
135	8.5 8.3	01.96	1 4.537	.1718	+15 46 42 67	.339	2	2	
136	6.1	01.97	1 17.900	.1501	+12 25 12.37	.334	2	2	Pr. Mo. (?)
137	8.0 8.0	02.99	1 18.602	.0644	− 1 17 3.28	.334	2	2	Pr. Mo. (?)
138	7.3 7.5	03.01	1 19 987	.1562	+13 21 1.23	.333	2	2	
139	7.2 7.2	02.97	1 25.392	.1210	+ 7 49 33.20	.331	2	2	
140	7.6 7.5	02.87	1 48.770	.1417	+11 1 1.30	.322	2	2	
141	8.0	01.85	2 34.304	.1711	+15 19 47.26	.304	2	2	
142	6.5	01.87	3 8.073	.1324	+ 9 22 26.74	.291	2	2	
143	5.7 6.0	02.89	3 12.990	.1050	+ 5 7 14.47	.289	2	2	Pr. Mo. $-^{s}.018$ $-0''.17$
144	6.4	01.96	4 53.227	.1734	+15 8 30.15	.249	2	2	
145	8.7 8.7	01.89	5 22.707	.1133	+ 6 13 6.63	.237	2	2	
146	6.3	01.97	5 24.745	.0849	+ 1 54 48.76	.236	2	2	
147	8.5 8.1	02.92	5 45.279	.1825	+16 14 43.08	.227	2	2	
148	8.2 8.2	02.93	5 58.903	.1681	+14 9 36.86	.222	2	2	
149	8.5	01.85	6 17.683	.0983	+ 3 53 50.93	.214	2	2	
150	8.5 8.3	01.87	6 28.777	.1630	+13 20 41.82	.210	2	2	
151	8.8 9.0	02.99	6 29.837	.1264	+ 8 2 51 50	.209	2	2	
152	6.8 6.8	03.01	7 3.874	.1525	+11 45 6 80	.195	2	2	Pr. Mo. (?)
153	8.5 8.5	01.89	7 30.868	.1853	+16 14 0.12	.183	2	2	
154	4.2	01.96	8 30.380	.1210	+ 7 2 47.95	.158	4	4	*Fund.*
		02.90	30.341		47.98		6	6	
155	8.6 8.5	02.97	8 31.866	.1438	+10 16 59.59	.157	2	2	
156	6.0 6.2	02.93	8 48.801	.1827	+15 36 14.76	.150	2	2	
157	6.1 6.4	02.99	9 30.285	.1176	+ 6 27 58.77	.132	2	2	
158	6.8	01.85	10 27.580	.0750	+ 0 23 0.09	.107	2	2	
159	7.0	01.87	10 32.885	.1383	+ 9 15 18.20	.104	2	2	
160	8.3 8.1	01.89	10 51.063	.1975	+17 6 23.31	.096	2	2	
161	7.8	01.96	11 26.435	.0881	+ 2 12 26.96	.081	2	2	
162	8.2 8.1	01.97	11 33.593	.1049	+ 4 31 40.58	.077	2	2	
163	8.8 8.6	02.97	12 9.434	.1896	+15 49 37.30	.062	2	2	
164	7.0 7.0	03.01	12 14.937	.1735	+13 42 57.56	.059	2	2	
165	5.1	02.96	12 38.398	.0948	+ 3 5 16.70	.048	4	4	*Fund.*
166	8.2 8.1	01.85	14 14.767	.1312	+ 7 52 10.60	.004	2	2	
167	8.0	01.87	14 26.014	.1600	+11 37 12.43	+18.999	2	2	
168	7.2 7.2	01.89	15 21.097	.1893	+15 10 16.78	.973	2	2	
169	6.5	01.96	16 2.560	.1571	+11 0 44.07	.953	2	2	
170	7.0 7.0	01.97	16 40.814	.1663	+12 4 49.43	.935	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
171	8.5 8.7	1902.93	1 17 8.588	3.0954	+ 2 59 37.74	+18.922	2	2	Pr. Mo. +^{s}.001 −0$''$.12
172	8.7 8.9	02.97	17 14.856	.1127	+ 5 12 48.92	.919	2	2	
174	6.5	01.85	17 28.040	.0817	+ 1 12 15.32	.912	2	2	
173	7.0 7.2	02.99	17 28.595	.1493	+ 9 50 55.40	.912	2	2	
175	7.5	01.87	17 32.754	.1050	+ 4 12 56.85	.910	2	2	
176	7.0 7.0	01.89	17 36.962	1574	+10 50 40.35	.909	2	2	Pr. Mo. (?)
177	7.7	01.96	17 43.055	.1261	+ 6 53 24.16	.905	2	2	Pr. Mo. +^{s}.005 +0$''$.21
178	7.9 7.8	03.01	17 52.031	.1402	+ 8 39 57.31	.901	2	2	
179	8.7 8.7	01.97	18 41.202	.1911	+14 47 0.04	.877	2	2	
180	8.8 8.6	02.93	19 1.154	.1798	+13 22 47.74	.868	2	2	
181	7.5	01.85	20 30.829	.0920	+ 2 27 5 94	.822	2	2	
182	6.8	01.87	20 42.130	.1527	+ 9 53 10.73	.816	2	2	
183	7.0 7.3	01.89	21 43.466	.0969	+ 3 0 59.55	.786	2	2	S. f. dup.
184	8.3 8.3	02.97	21 44.521	.1618	+10 50 54.28	.785	2	2	
185	8.0 7.9	01.97	22 28.256	.1122	+ 4 50 14.45	.763	2	2	
186	7.2 7.2	02.93	23 1.441	.2132	+16 33 41.93	.746	2	2	Pr. Mo. (?)
187	6.4	01.96	23 8.243	.1343	+ 7 26 35 37	.742	2	2	N. p. 4^{s}.5
188	8.3 8.1	02.99	23 55.733	.1494	+ 9 9 38.09	.718	2	2	
189	8.1	01.85	24 7.268	.1732	+11 52 18.74	.711	2	2	
190	8.7 8.7	01.87	24 33.860	.1898	+13 41 34.57	.698	2	2	S. f. 4^{s}.3
191	5.2 5.2	01.89	24 56.762	.1200	+ 5 37 42.22	.685	2	2	Pr. Mo. +^{s}.019 −0$''$.03
192	8.5 9.0	01.97	25 45.372	.0869	+ 1 42 19.18	.660	2	2	
193	3.7	01.96	26 7.862	.2022	+14 49 48.97	.648	2	2	*Fund.*
		02.97	7.876		48.86		2	2	
194	7.5 7.5	02.93	26 25.511	.1624	+10 22 25.27	.638	2	2	
195	8.0 8.0	03.01	26 33.200	.2093	+15 32 8.76	.634	2	2	Pr. Mo. (?)
196	8.2 8.5	02.99	27 41.321	.1095	+ 4 15 37.88	.597	2	2	
197	8.2	01.85	28 34.660	.1010	+ 3 15 30.95	.568	2	2	
198	8.6 8.1	01.87	28 40.205	.1475	+ 8 28 49.89	.565	2	2	S. p. 7^{s}.3
199	6.8 7.5	01.89	29 32.757	.1810	+12 2 47.57	.535	2	2	S. p. dup.
200	7.8 7.9	01.96	29 34 497	.1981	+13 52 23.03	.535	2	2	
201	8.3 8.3	01.97	30 16.362	.1632	+10 2 59.94	.512	2	2	
202	6.6 6.7	03.01	30 25.490	.2019	+14 9 0.35	.506	2	2	
203	6.9 6.9	02.97	30 48.804	.1369	+ 7 8 1.49	.493	2	2	dup. mean.
204	7.8 7.6	02.99	31 5.738	1067	+ 3 48 12.05	.484	2	2	
205	7.5	01.85	31 27.929	.1288	+ 6 12 29.12	.471	2	2	
206	5.6	01.87	31 47.729	.1796	+11 37 48.32	.460	2	2	*Fund.*
		02.93	47.745		48.02		2	2	
207	8.5 8.4	01.89	31 49.023	.1191	+ 5 7 21.67	.459	2	2	
208	7.8 7.3	01.96	33 10.254	.0915	+ 2 4 37.63	.413	2	2	
209	6.8	01.97	33 51.770	.2261	+16 7 4.45	.389	2	2	
210	7.5 7.3	02.93	33 53.831	.2029	+13 46 41.40	.388	2	2	
211	6.1 6.1	02.97	34 17.043	.2246	+15 53 54.14	.374	2	2	
212	8.7 8.7	02.99	34 21.593	.2148	+14 55 0.80	.371	2	2	
213	6 7	01.85	35 18.817	.1507	+ 8 15 13.32	.338	2	2	
214	8.5	01.87	35 55.181	.1398	+ 7 5 5.55	.317	2	2	
215	4.7	01.89	36 13.591	.1198	+ 4 58 54.32	.306	2	2	*Fund.*
		03.01	13.553		53.92		2	2	
216	8.5 8.5	01.96	36 44.463	.1122	+ 4 10 2.78	.287	2	2	
217	7.8	01.97	37 3.728	.2223	+15 16 26.00	.276	2	2	
218	8.2 8.0	02.93	37 18.692	.1669	+ 9 44 25.29	.266	2	2	
219	8.3 8.3	02.97	37 31.688	.1754	+10 34 54.24	.259	2	2	
220	8.5 8.5	02.99	37 42.792	.1905	+12 3 48.17	.252	2	2	
221	8.0	01.85	38 41.166	.1024	+ 3 5 13.07	.217	2	2	
222	8.3	01.87	39 3.816	.2073	+13 33 17.76	.203	2	2	
223	4.4	01.97	40 6.713	.1584	+ 8 39 16 65	.164	2	2	*Fund.*
		03.01	6.724		16.34		2	2	
224	8.8 9.5	01.93	40 29.620	.2191	+14 30 9.21	.150	2	2	S. p.
Anon.	9.4	01.92	40 31.112	.2192	+14 30 29.66	.149	2	2	N. f.
225	8.7 8.7	02.93	40 59.887	.1326	+ 6 2 6.87	.131	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
226	6.5 6.5	1902.99	1 41 9.564	3.2459	+16 54 42.82	+18.126	2 2	
227	6.8 7.0	02.97	41 50.700	.1772	+10 20 40.80	.100	2 2	
228	8.3	01.85	42 15.465	.2022	+12 41 27.88	.084	2 2	
229	5.6	01.87	42 45.410	.2435	+16 27 26.81	.066	2 2	Pr. Mo. (?)
230	7.3 7.3	01.89	43 25.356	.1458	+ 7 11 10.26	.040	2 2	
231	8.5 8.3	03.01	44 16.981	.1251	+ 5 7 45.68	.007	2 2	
232	8.5 8.5	01.97	44 42.955	.2177	+13 51 8 92	17.990	2 2	
233	5.8	01.85	45 33.505	.1829	+10 32 53.33	.958	2 2	*Fund.*
		02.99	33.526		53.36		2 2	
234	8.5 8.3	01.87	45 49.049	.1111	+ 3 43 34.56	.948	2 2	
235	8.2 8.2	01.89	46 15.306	.1650	+ 8 48 26.11	.931	2 2	
236	8.5 8.5	01.96	47 35.499	.1164	+ 4 10 10.46	.878	2 2	
237	8.2 8.2	01.97	47 50.161	.2340	+14 56 22.55	.868	2 2	
238	7.2 7.4	02.93	48 9.053	.2036	+12 11 25 62	.856	2 2	
239	7.8 7.5	02.97	48 22.879	.1486	+ 7 8 28.76	.847	2 2	
240	8.0 8.0	02.99	48 53.572	.1742	+ 9 27 37.32	.826	2 2	
241	8.0 7.5	01.85	49 4.734	.1904	+10 54 36.51	.819	2 2	
242	7.0	01.87	49 5.392	.1616	+ 8 17 20.51	.819	2 2	
243	7.9 8.0	01.89	49 24.775	.2171	+13 15 55.42	.805	2 2	
245	8.0 7.8	02.93	50 4.235	.1367	+ 5 56 49.60	.779	2 2	
244	8.2 8.2	01.96	50 4.644	.2576	+16 41 55.29	.778	2 2	
246	5.2	01.97	51 53.170	.2679	+17 19 46.16	.705	4 4	*Fund.*
		02.70	53.158		46 05		7 7	
		03.01	53.147		46.07		2 2	
247	8.0	01.85	53 13.052	.2474	+15 26 34.83	.650	2 2	
248	6.2	01.87	54 4.570	.2058	+11 48 34.80	.614	2 2	
249	7.5 7.0	01.98	54 44.038	.1347	+ 5 33 1.74	.587	2 2	
250	8.7 8.6	01.96	54 57.191	.1418	+ 6 10 7.51	.578	2 2	
251	7.7 7.7	01.97	55 3.379	.1874	+10 8 42.35	.573	2 2	
252	7.5 7.5	02.01	55 9.713	.1162	+ 3 54 15.72	.568	2 2	
253	8.5 8.5	02.93	55 27.435	.1714	+ 8 43 39.53	.556	2 2	
254	7.7 7.7	01.89	55 43.370	.2587	+16 4 54.01	.545	2 2	
255	6.9	01.85	56 25.416	.2415	+14 35 1.22	.515	2 2	
256	7.3	01.87	56 35 458	.1567	+ 7 22 57.21	.509	2 2	
257	6.5	01.96	57 12.077	.2233	+12 59 40.07	.482	2 2	
258	7.7 7.7	01.89	57 17.692	.1713	+ 8 35 58.89	.478	2 2	
259	7.0 6.9	01.97	58 13.434	.2836	+17 46 21.72	.438	2 2	
260	8.5	01.85	2 0 14.891	.2792	+17 10 20.18	.351	2 2	
261	8.8	01.87	0 19.075	.2222	+12 36 41.99	.348	2 2	
262	7.7 7.7	02.01	0 43.676	.3184	+20 6 53.43	.329	2 2	
263	7.0 6.9	01.96	0 55.402	.1642	+ 7 46 14.13	.321	2 2	
264	7.9 8.2	01.97	1 16.749	.2419	+14 6 24.08	.305	2 2	
265	7.7 7.7	01.98	1 20.245	.1914	+10 0 1.02	.302	2 2	
266	7.3	01.89	2 16.516	.2873	+17 33 11.61	.260	2 2	
267	7.5 7.0	02.98	2 32.916	.1380	+ 5 30 34.93	.249	2 2	
268	7.0 7.0	02.99	2 37.028	.2591	+15 19 46.78	.245	2 2	
269	7.9 7.6	02.93	2 46.434	.2014	+10 42 52.96	.238	2 2	
270	7.8 7.6	02.01	3 1.430	.1730	+ 8 22 30.89	.228	2 2	N. f. pair.
271	8.5	01.85	3 41.052	.1510	+ 6 32 0.35	.198	2 2	
272	6.8	01.87	3 53.330	.2794	+16 45 18.38	.189	2 2	Pr. Mo. +^{s}.008 −0″.19
273	7.5 7.8	01.89	4 9.725	.3214	+19 52 28.43	.177	2 2	N. p. dup. 8″
274	7.5	01.96	4 23.161	.2279	+12 42 8.29	.166	2 2	
275	5.9	01.97	5 4.957	.3116	+19 1 43.40	.135	2 2	
276	7.5 7.5	01.98	5 46.383	.3386	+20 54 22.18	.103	2 2	Pr. Mo. +^{s}.021 −0″.01
277	5.7 6.2	02.01	6 4.242	.1718	+ 8 6 5.71	.090	2 2	Pr. Mo. − .010 −0 .11
278	8.4 8.3	02.99	7 9.981	.1947	+ 9 51 33.81	.039	2 2	
279	5.5 5.5	03.01	7 12.055	.3391	+20 44 28 07	.038	2 2	Pr. Mo. +^{s}.013 0″.00
280	7.5 7.5	02.98	7 17.664	.2409	+13 26 56.33	.033	2 2	
281	6.2 6.2	01.89	7 35.959	.2591	+14 48 39.89	.019	2 2	Pr. Mo. (?)
282	4.5	01.85	7 41.887	.1764	+ 8 22 39.29	.015	2 2	*Fund.*

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
283	7.2	1901 96	2 8 18.767	3.3188	+19 8 46.23	+16.986	2	2	
284	7.6 8.0	01 97	8 49.929	.2214	+11 48 59.27	.962	2	2	
285	8.1 8.1	01.98	10 28.220	.2702	+15 21 17.84	.884	2	2	
286	8.2 8.4	02.01	10 31.096	.2110	+10 53 40.74	.883	2	2	
287	8.5 8.5	02.98	11 2.877	.1548	+ 6 30 27.12	.858	2	2	
288	8.6 8.5	02.99	11 32.501	.1914	+ 9 19 20.53	.835	2	2	N. f. $12^{s}.8$
289	8.5 8.5	03.01	11 33.892	.2922	+16 51 8.34	.833	2	2	
290	7.3 7.3	02.01	12 13.333	.3091	+17 59 28.92	.802	2	2	
291	5.6	01.93	12 33.698	.3302	+19 26 19.10	.786	4	4	*Fund.*
		02.93	33.678		19.47		2	2	
292	8.0 7.8	01.96	12 57.257	.3599	+21 26 10.29	.767	2	2	
293	6.5	01.98	13 26.548	.2356	+12 31 46.50	.744	2	2	Pr. Mo. (?)
294	7.5 7.5	03.01	13 35.080	.3290	+19 13 47.97	.737	2	2	Pr. Mo. $+^{s}.003$ $-0''.11$
295	8.0 8.0	02.98	14 47.229	.2550	+13 50 19.38	.679	2	2	
296	8.5 8.7	02.99	14 58.003	.3376	+19 39 55.15	.670	2	2	
297	8.3 8.3	01.89	15 32.374	.1977	+ 9 32 53.14	.642	2	2	
298	7.8 7.8	01.96	16 3.241	.1830	+ 8 25 20.41	.616	2	2	
299	7.5	01.97	16 14.433	.1682	+ 7 17 40.35	.608	2	2	
300	8.0 8.0	01.98	16 20.881	.2830	+15 42 18.71	.602	2	2	
301	7.0 7.0	02.01	17 2.670	.2940	+16 24 50.57	.568	2	2	
302	8.5 8.7	03.01	17 7.458	.3162	+17 57 7.49	.564	2	2	Pr. Mo. (?)
303	7.9 7.8	02.98	17 52.376	.2109	+10 22 51.46	.528	2	2	
304	8.5 9.0	02.99	18 10.410	.3626	+20 57 34.78	.513	2	2	
305	7.3 7.4	01.89	18 58.764	.2775	+15 4 18 03	.472	2	2	
306	5.4	01.96	19 27.342	.2092	+10 9 28.12	.449	2	2	
307	8.0 7.9	01.97	20 10.560	.3491	+19 49 47.46	.412	2	2	Pr. Mo. (?)
308	7.3 7.4	01.98	20 11.183	.2288	+11 31 35.48	.412	2	2	Pr. Mo. $-^{s}.006$ $-0''.30$
309	8.0 8.0	02.01	20 39.793	.3292	+18 27 17.91	.388	2	2	
310	7.8 8.0	02.98	21 1.888	.2426	+12 26 53.32	.369	2	2	
311	7.8 8.0	02.99	21 18.660	.3913	+22 25 43.69	.356	2	2	
312	6.8	01.89	22 1.416	.2978	+16 11 42.54	.319	2	2	
313	4.4	01.96	22 50.490	.1821	+ 8 0 42.89	.278	2	2	*Fund.*
		03.01	50.473		43.22		2	2	
314	8.4 8.4	01.99	23 6.955	.2589	+13 25 47.68	.264	2	3	Pr. Mo. (?)
315	8.5 8.5	01.98	23 25.885	.2844	+15 9 12.11	.247	2	2	
316	7.5 7.7	02.01	23 38.275	.3755	+21 8 52.08	.237	2	2	
317	6.3 6.1	02.98	24 14.895	.1986	+ 9 7 9.16	.205	2	2	
318	6.1 6.2	02.99	25 1.882	.3509	+19 24 40.62	.165	2	2	
319	8.4 8.5	03.01	25 5.886	.2205	+10 37 2.24	.161	2	2	
320	6.5	01.89	25 21.502	.3184	+17 15 41.57	.148	2	2	
321	8.0 8.0	01.96	26 42.463	.3931	+21 53 29.55	.078	2	2	
322	7.6 8.0	01.97	26 46.237	.2456	+12 14 39.87	.075	2	2	
323	6.5 6.5	01.98	27 25.393	.2810	+14 35 30.65	.041	2	2	
324	7.0 7.0	02.01	28 1.018	.3406	+18 26 20.59	.009	2	2	
325	8.1 8.2	02.98	28 57.582	.4078	+22 31 46.33	+15 960	2	2	
326	6.9	01.89	29 1.864	.2320	+11 9 58.12	.956	2	2	
327	8.1 8.2	01.96	30 9.108	.3085	+16 10 28.59	.896	2	2	
Anon.	7.8	01.97	30 14.991	.2665	+13 22 45.28	.890	2	1	N. p.
328	7.5 7.5	01.99	30 33.848	.2656	+13 19 6.41	.874	2	2	S. f.
329	7.6 7.6	01.98	30 59.684	.4132	+22 36 59.68	.852	2	2	
330	8.3 8.5	02.01	31 5.004	.3746	+20 15 55.51	.846	2	2	
331	5.6 5.5	02.99	31 10.736	.2466	+12 0 50.06	.841	2	2	Pr. Mo. $+^{s}.018$ $-0''.08$
332	7.0 7.0	03.01	31 14.429	.4408	+24 12 43.69	.838	2	2	Pr. Mo. + .013 −0 .01
333	6.5 6.3	02 98	31 17.153	.1773	+ 7 17 41.35	.835	2	2	
334	8.3 8.3	01.89	32 6.402	.4166	+22 41 42.59	.792	2	2	
335	5.4	01.87	33 8.169	.3990	+21 31 44.64	.736	2	2	*Fund.*
		02.99	8.129		45.11		2	2	
336	7.5	01.96	33 30.267	.2858	+14 25 42.07	.716	2	2	S. p. dup.
337	7.9	01.97	33 39.317	.1963	+ 8 29 16.42	.707	2	2	
338	7.1 7.2	03.01	33 40.330	.2219	+10 12 23.32	.707	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.			Precess	Decl. 1900.0.			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
338*a*	8.1	8.1	1901.98	2	34	57.640	3.3468	+18	10	8.40	+15.636	2	2	
339	7.7	7.3	02.01		34	59.694	.2670	+13	5	51.63	.634	2	2	
340	8.8	8.6	02.98		35	9.154	.3007	+15	15	26.18	.626	2	2	
342	5.8	5.8	01.89		36	43.601	.3728	+19	35	7.29	.539	2	2	
343	8.3	8.1	01.96		36	47.311	.3231	+16	31	54.98	.535	2	2	
344	6.3		01.97		37	5.849	.2263	+10	18	55.57	.519	2	2	
345	6.5		01.98		38	44.163	.3388	+17	20	26.81	.428	2	2	
346	5.8	5.8	02.99		39	2.240	.2996	+14	53	18.79	.411	2	2	
347	5.2	5.2	02.01		39	30.621	.2548	+12	1	30.04	.385	2	2	
348	4.4		01.87		39	32.174	.2187	+ 9	41	31.08	.383	2	2	*Fund.*
349	7.8	7.8	02.98		39	33.541	.2831	+13	48	56.37	.381	2	2	
349*a*	7.6	7.6	01.97		40	9.357	.3286	+16	35	55.73	.347	2	2	
349*b*	8.2	8.2	01.89		40	43.547	.3595	+18	25	0.92	.315	2	2	
350	6.5	6.7	02.99		41	31.477	.4316	+22	32	29.07	.271	2	2	
351	8.2	8.5	01.96		41	46.529	.4039	+20	55	35.13	.257	2	2	Mean: close dup.
352	6.8	7.5	03.01		41	48.709	.3702	+18	57	25.44	.254	2	2	S. f. Pr. Mo. $+^{s}.008$ $-0''.16$
353	7.5	7.5	01.98		42	1.596	.2081	+ 8	53	24.62	.242	2	2	
354	8 3	8.3	02.01		42	40.839	.3824	+19	35	32.63	.205	2	2	
355	6.1	6.4	02.98		42	55.586	.3535	+17	52	2.24	.191	2	2	
356	5.6	6.0	03.01		43	42.584	.3408	+17	2	53.72	.146	2	2	
357	7.6		01.89		44	26.530	.2630	+12	14	28.72	.105	2	2	
358	8.0	8.1	01.96		44	43.901	.2803	+13	17	45.39	.087	2	2	
359	8.3	8.3	01.97		44	50.708	.4227	+21	42	0.82	.082	2	2	
360	8.4	8.5	02.99		44	53.087	.2467	+11	12	2.90	.079	2	2	
361	7.2	7.2	01.98		45	3.318	.3715	+18	44	53.95	.069	2	2	Pr. Mo. $+^{s}.012$ $-0''.07$
362	5.5		02.01		45	58.201	.3041	+14	40	11.91	.016	2	2	*Fund.*
			02.98			58.209				12.57		2	2	
			03.02			58.232				11.18		2	2	
363	6.5		01.89		47	37.527	.3295	+16	4	31.06	+14.920	2	2	
364	6.8		01.96		48	36.604	.4015	+20	9	27.81	.863	2	2	
365	8.0	8.1	01.97		48	55.611	.2453	+10	54	6.35	.843	2	2	
366	8.5	9.0	01.98		49	2.369	.2205	+ 9	21	54.23	.837	2	2	S. p. pair.
367	7.8	8.0	03.01		49	9.844	.2722	+12	31	55.70	.829	2	2	
368	8.8	8.8	02.99		49	54.318	.4406	+22	11	54.39	.786	2	2	
369	7.0	7.2	02 99		50	9.324	.3026	+14	18	5.62	.771	2	2	
370	5.8		02.01		50	11.229	.3647	+17	55	34.89	.769	2	2	
371	5.5		01.89		50	47.392	.3602	+17	37	27.26	.734	2	2	Pr. Mo. $+^{s}.019$ $-0''.19$
372	7.3	7.3	01.96		51	54.188	.3317	+15	53	31.21	.667	2	2	
373	5.9		01.97		52	21.733	.4095	+20	16	3.98	.639	2	2	
374	6.8		02.98		52	47.529	.4746	+23	43	58.76	.614	2	2	
375	7.0	7.0	02.01		53	9.021	.4281	+21	13	3.61	.593	2	2	
376	7.5	7.5	03.02		53	15.967	.2875	+13	12	21.83	.585	2	2	
377	8.0	7.5	02.99		53	29.275	.3989	+19	35	25.69	.573	2	2	
378	4.6		01.98		53	29.545	.4236	+20	56	25.59	.572	2	2	*Fund.*
379	7.0	7.4	01.89		54	50.057	.4536	+22	25	51.34	.491	2	2	
380	6.8		01.96		54	54.141	.3655	+17	36	29.06	.487	2	2	
381	7.0	6.8	01.97		55	18.630	.2434	+10	28	26.47	.462	2	2	
382	7.5	7.3	02.01		55	21.825	.3141	+14	38	9.84	.459	2	2	
383	8.0	8.2	02.99		55	30.908	.3914	+19	0	24.72	.450	2	2	
384	8.8	8.8	01.98		57	16.722	.3609	+17	10	19.97	.343	2	2	
385	7.2	7.2	01.89		57	40.578	.4630	+22	40	6.90	.319	2	2	
386	8.0	8.0	01.96		58	2.066	.3073	+14	4	44.90	.296	2	2	
387	6.5	6.5	02.99		59	6.728	.3329	+15	28	4.64	.230	2	2	
388	6.0		02.01		59	34.656	.5096	+24	51	58.22	.201	2	2	S. star: dup.
389	7.5	7.7	03.01		59	46.618	.4256	+20	30	49.85	.189	2	2	
390	7.5	7.1	02.99	3	0	50.179	.2615	+11	16	40.65	.124	2	2	
391	5.9		01.89		0	54.221	.2879	+12	48	5.01	.119	2	2	*Fund.*
			02.04			54.222				5.15		4	4	
			02.99			54.237				5.22		3	3	
392	6.7		01.96		1	47.824	.3725	+17	29	39.00	.064	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.			Precess.	Decl. 1900.0.			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
393	7.8		1901.97	3	2	2.700	3.4830	+23	18	15.08	+14.048	2	2	
394	6.5		01.98		2	40.946	.3906	+18	24	39.71	.008	2	2	
395	7.8	7.8	02.05		3	10.317	.3283	+14	57	23.73	+13.978	2	2	
396	6.9	6.8	02.02		3	36.017	.4289	+20	22	43.95	.951	2	2	
397	7.7	7.5	03.01		4	53.899	.4527	+21	30	52 32	.869	2	2	
398	8.8	8.5	01.97		5	14.078	.3126	+13	57	51.62	.848	2	2	
399	6.3	6.3	02.01		5	52.336	.2901	+12	40	7.33	.808	2	2	
400	4.5		01.97		5	54.573	.4126	+19	20	54.94	.805	5	5	*Fund.*
			02.99			54.549				54.88		2	2	
401	7.0	7.2	02.02		6	48.796	.3538	+16	8	24.83	.747	2	2	
402	8.1	8.1	02.01		8	9.901	.5056	+23	53	28.18	.661	2	2	
403	7.0		01.97		8	13.734	.4016	+18	35	55.55	.657	2	2	
404	6.8	6.8	02.05		8	27.852	.4795	+22	34	49.02	.642	2	2	
405	7.3	7.3	03 01		8	33.706	.3388	+15	13	0.84	.637	2	2	
406	8.8	8.8	01.96		9	6.833	.3849	+17	39	21.21	.599	2	2	
407	4.9		01.98		9	9.120	.4429	+20	40	25.71	.598	2	2	
408	8.0	8.0	02.02		10	34.403	.2689	+11	15	29.81	.507	2	2	Pr. Mo. (?)
409	8.8	8.8	01.97		11	37.117	.4713	+21	54	55.54	.439	2	2	
410	7.5	7.5	02.01		12	10.576	.5256	+24	30	44.30	.402	2	2	
411	7.0	7.1	02.05		12	20.725	.3107	+13	28	48.93	.392	2	2	
412	7.3	7.3	01.98		12	52.739	.3360	+14	49	8.73	.356	2	2	Pr. Mo. ˢ.000 −0″.32
413	8.3	8.1	01.96		13	44 308	.2865	+12	5	16.41	.301	2	2	
414	7.3	7.3	02.02		14	5.781	.4115	+18	42	46.57	.277	2	2	
415	8.3	8.3	03.01		14	7.702	.4351	+19	54	50.25	.276	2	2	
416	7.9	8.0	02.99		14	20.130	.3814	+17	8	11.72	.262	2	2	
417	7.0	7.5	01.97		14	29.606	.5048	+23	19	41.09	.252	2	2	S. f. dup.
418	5.2		02.03		15	27.130	.4544	+20	47	11.90	.188	4	4	*Fund.*
			03.02			27.135				12.12		3	3	
419	5.2		01.96		16	59.833	.4485	+20	23	3.67	.086	2	2	
420	8.5	8.0	01.97		17	41.395	.3674	+16	12	34.76	.040	2	2	S. f. 12ˢ
421	7.5	7.3	01.98		18	16.681	.4336	+19	33	4.07	.001	2	2	
422	5.6	5.6	02.01		18	24.072	.5334	+24	22	12.21	+12.993	2	2	
424	6.2	6.0	02.05		18	39.934	.2940	+12	16	29.22	.975	2	2	
423	5.6	6.0	02.02		18	40.051	.4522	+20	26	55.38	.975	2	2	
425	6.8	6.8	03.01		18	45.691	.4776	+21	41	8.90	.968	2	2	
426	8.3	8.3	02.99		19	10.129	.3385	+14	37	10.40	.942	2	2	
427	8.3	8.4	01.98		19	43.749	.3927	+17	23	34.28	.904	2	2	Pr. Mo. (?)
428	8.0	8.0	01.96		19	51.207	.3224	+13	44	5.01	.896	2	2	
429	6.5		01.97		21	20.642	.4146	+18	24	23.21	.796	2	2	
430	8.0	8.0	02.01		21	55.955	.5278	+23	50	3.85	.756	2	2	
431	6.1	6.1	02.02		22	35.743	.4996	+22	27	33.85	.711	2	2	Pr. Mo. ˢ.000 −0″.13
432	7.2	7.1	02.05		23	1.827	.4547	+20	16	39.13	.682	2	2	
433	7.3	7.3	03.01		23	23.310	.3433	+14	39	3.08	.657	2	2	
434	7.5	7.5	01.96		24	3.852	.3784	+16	25	4.23	.611	2	2	
434*a*	8.0	8.0	01.98		24	43.849	.4464	+19	45	40.33	.566	2	2	Pr. Mo. (?)
435	7.8	7.8	02.01		25	19.116	.5570	+24	54	52.33	.526	2	2	
436	4.3		01.97		25	21.066	.3055	+12	35	37.93	.524	2	2	*Fund.*
			02.69			21.065				38.61		3	3	
			03.02			21 105				38.02		3	3	
438	8.8	8.8	02.02		25	39.014	.4834	+21	28	53.15	.504	2	2	N. f. 6ˢ
439	6.5	6.7	03.01		25	40.106	.4037	+17	35	46.90	.502	2	2	
440	7.8	7.5	02.05		26	7.030	.5231	+23	18	24.24	.470	2	2	Fol. star 18ˢ
441	8.3	8.4	01.96		27	17.008	.3580	+15	12	33.86	.392	2	2	
442	7.5	7.5	01.98		27	48.226	.3239	+13	26	42.39	.356	2	2	
443	5.9		01.97		28	31.154	.5449	+24	7	45.35	.306	2	2	20″ dup.
444	7.0	7.2	02.01		29	34.774	.4280	+18	34	12.02	.233	2	2	
445	7.0	7.0	03.01		30	37.518	.4535	+19	44	12.50	.160	2	2	
446	7.0	7.0	02.02		31	5.093	.5214	+22	52	49.94	.128	2	2	
447	8.0	7.8	02.05		31	47.858	.5457	+23	55	51.54	.078	2	2	
448	6 5	6.5	02.99		32	10.977	.3605	+15	6	7.27	.052	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
449	6.8	1901.96	3 32 48.499	3.5120	+22 19 58.54	+12.007	2 2	
450	6.2	01.97	33 11.757	.4749	+20 35 22.74	+11.980	2 2	
451	7.0 7.0	01.98	33 43.179	.3314	+13 34 4.19	.944	2 2	Pr. Mo. $^{s}.000$ $-0''.14$
452	6.0	02.02	33 46.364	.3844	+16 12 41.11	.941	2 2	*Fund.*
453	8.3 8.0	02.06	33 49.363	.4225	+18 3 50.69	.937	2 2	Pr. Mo. (?)
454	6.7 6.5	02.05	34 47.835	.5747	+25 0 22.06	.868	2 2	
455	5.4	01.98	36 32.821	.4534	+19 22 48.34	.744	2 2	*Fund.*
456	8.8 8.5	01.96	36 36.376	.3519	+14 28 17.18	.741	2 2	
457	7.5 7.5	01.97	36 56.666	.4034	+16 58 21.96	.715	2 2	
458	6.4 6.0	03.01	38 0.170	.4544	+19 20 56.24	.641	2 2	Pr. Mo. (?)
459	5.9 5.9	02.01	38 38.987	.4824	+20 36 46.16	.595	2 2	
460	6.5 6.3	02.02	38 51.471	.5574	+23 58 29.81	.581	2 2	
461	3.8	02.05	38 56.168	.5536	+23 47 56.41	.575	2 2	*Fund.*
		03.02	56.150		56.48		2 2	
462	6.3 5.6	01.98	39 11.603	.5706	+24 31 31.74	.557	2 2	
463	4.4	01.96	39 15.236	.5621	+24 9 13.40	.552	2 2	
464	8.0 8.0	01.97	39 46.655	.5229	+22 22 54.12	.514	2 2	
465	4.0	02.99	39 52.475	.5608	+24 3 18.74	.507	2 2	
466	8.4 8.4	02.01	40 16.860	.4337	+18 15 13.84	.478	2 2	
467	4.2 4.2	02.02	40 23.367	.5520	+23 38 12.77	.471	2 2	
468	7.0 7.0	02.05	40 52.513	.3298	+13 11 51.82	.436	2 2	
469	3.0	03.02	41 32.309	.5574	+23 47 45.76	.388	3 3	*Fund.*
470	8.4 8.3	02.99	41 53.973	.3963	+16 23 45.94	.362	2 2	
471	8.2 8.2	01.96	43 1.088	.3724	+15 11 52.20	.281	2 2	
472	3.8	01.97	43 12.845	.5587	+23 44 52.01	.267	2 2	
473	6.2	01.98	43 14.156	.5606	+23 49 51.70	.266	2 2	
474	8.5 8.3	02.01	43 57.207	.4944	+20 51 17.21	.213	2 2	
475	6.0 6.2	02.02	44 2.253	.5187	+21 56 24.04	.208	2 2	
476	8.2 8.5	02.05	44 8.231	.4597	+19 15 41.39	.200	2 2	
477	5.5 5.5	03.01	44 18.100	.5960	+25 16 39.86	.188	2 2	
478	7.2 7.1	02.99	45 44.093	.5162	+21 43 49.19	.084	2 2	
479	7.9 8.0	01.96	46 38.380	.4415	+18 17 53.71	.018	2 2	
480	7.5 7.7	01.97	47 19.619	.3530	+14 5 0.43	+10.968	2 2	
481	8.7 8.4	01.98	47 25.978	.5433	+22 49 29.93	.960	2 2	
482	6.0	02.02	47 26.871	.4151	+17 1 45.23	.959	4 4	*Fund.*
		03.04	26.876		45.86		1 1	
483	6.6 6.6	02.05	47 33.060	.6035	+25 23 9.15	.951	2 2	
484	8.3 8.0	03.01	48 10.912	.3705	+14 53 14.66	.905	2 2	
485	7.0 7.0	02.99	48 45.741	.4013	+16 19 28.44	.862	2 2	Pr. Mo. (?)
486	5.7	01.96	50 57.438	.5333	+22 11 23.51	.701	2 2	Pr. Mo. $+^{s}.008$ $-0''.14$
487	8.5 8.5	01.97	51 4.090	.4792	+19 47 34.85	.692	2 2	
488	7.0 7.0	01.98	51 7.989	.5496	+22 53 6.83	.687	2 2	
489	8.5 8.5	02.02	51 15.779	.4519	+18 32 57.91	.678	2 2	
490	7.5 7.1	02.03	51 19.879	.5073	+21 2 0.46	.673	1 2	
		03.04	19.886		0.71		1 1	
491	6.8 6.8	03.01	51 27.504	.5803	+24 10 20.31	.664	2 2	
492	6.8 7.2	02.99	52 59.599	.6492	+26 54 39.97	.550	2 2	
493	6.8	01.96	53 44.221	.3497	+13 41 27.30	.494	2 2	
494	6.5	01.97	54 54.023	.4219	+17 0 51.01	.407	2 2	Pr. Mo. (?)
495	7.5 7.5	01.98	55 0.364	.5554	+22 55 11.30	.400	2 2	N. p. dup. 7″ red.
496	5.7 5.7	02.01	55 3.056	.4417	+17 54 42.96	.396	2 2	Pr. Mo. (?)
497	7.7 7.7	02.02	55 5.969	.3827	+15 11 36.49	.393	2 2	
498	6.6 6.9	02.03	55 17.370	.4867	+19 55 8.71	.379	1 2	
		03.04	17.440		8.67		1 1	
499	8.7 8.7	02.10	55 52.450	.6221	+25 38 35.95	.335	1 1	
		03.04	52.391		36.05		1 1	
500	5.6 5.7	02.03	58 22.742	.5815	+23 49 51.05	.146	1 2	
		03.04	22.738		51.19		1 1	
501	4.5	01.96	58 46.927	.5340	+21 48 31.41	.115	4 4	*Fund.*
		02.99	46.945		31.52		3 3	

No.	Mag.		Epoch.	R. A. 1900.0.			Precess.	Decl. 1900.0.			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
501	(*Con.*)		1903.07	3	58	46.916		+21	48	31.58		7	7	
			03.97			46.924				31.66		4	4	
502	6.5	6 5	01.98		58	56.126	3.4306	+17	14	34.04	+10.104	2	2	
503	6.5	6.3	02.01		59	24.995	.5331	+21	44	20.50	.068	2	2	Pr. Mo. $+^{s}.013$ $-0''.13$
504	8.3	8.3	02.02		59	47.401	.4861	+19	40	56.30	.040	2	2	
505	7.5	7.5	02.10	4	0	0.507	.6354	+25	56	25.57	.023	1	1	
			03.04			0.483				25.75		1	1	
506	5.4	5.7	02.99		0	28.298	.6712	+27	19	49.93	+ 9.988	2	2	
507	7.5	7.4	02.01		0	49.563	.4690	+18	52	50.23	.960	2	2	Pr. Mo. (?)
508	8.7	8.7	02.02		1	15.777	.5178	+20	59	36.27	.928	2	2	
509	6.5	6.7	01.98		2	2.369	.3818	+14	53	42.21	.869	2	2	N. f. dup.
510	7.5	7.6	02.03		2	12.912	.4118	+16	15	47.18	.855	1	1	
			03.04			12.922				47.78		1	1	
511	6.3	6.0	03.13		2	15.756	.4298	+17	4	21.02	.851	2	2	
512	7.2	7.0	03.96		2	52.465	.5817	+23	36	19.40	.804	2	2	
513	7.7	7.7	03.98		2	56.356	.5632	+22	49	54.98	.800	2	2	S. p. dup.
		7.7	03.99		2	56.370	.5632		50	0.13	.800	2	2	N. f.
514	5.8		02.10		3	20.410	.4820	+19	20	42.01	.770	1	1	*Fund.*
			03.06			20.374				41.62		3	3	
515	8.7	8.7	02.02		4	33.042	.6206	+25	6	3.05	.677	2	2	
516	5.6	5.6	02.01		4	44.337	.6490	+26	13	11.83	.663	2	2	
517	6.5	6.5	01.98		4	55.225	.4566	+18	9	43.85	.649	2	2	Pr. Mo. (?)
518	7.5	7.3	02.03		5	14.439	.4016	+15	41	8.42	.624	1	1	
			03.04			14.439				9.07		1	1	
519	8.6	8.6	03.08		6	17.497	.5300	+21	16	39.15	.543	2	2	
520	6.4	6.3	03.13		6	47.165	.4325	+17	1	11.96	.505	2	2	
521	6.2	6.0	03.96		6	55 408	.5516	+22	9	23.27	.496	2	2	
522	8.1	8.1	03.98		8	21.331	.6925	+27	42	22.36	.384	2	2	
523	7.0	7.0	01.98		8	27.246	.5846	+23	26	33.26	.376	2	2	
524	8.3	8.3	02 01		8	31.578	.4867	+19	19	36.99	.371	2	2	
525	6.4	6.4	02.02		10	5.615	.3934	+15	9	1.56	.250	2	2	Pr. Mo. (?)
526	4.6	5.5	02.03		11	24.008	.5130	+20	19	56.66	.148	1	1	
			03 04			23.996				56.93		1	1	
527	7.7	7.6	02.10		12	14.500	.4597	+18	0	41.90	.083	1	1	Pr. Mo. (?)
			03.04			14.511				41.88		1	1	
528	7.5	7.6	03.08		12	17.218	.5674	+22	33	42.92	.079	2	2	
529	8.2	8.2	03.13		12	24.901	.6219	+24	45	31.55	.069	2	2	
530	5.4	5.5	03.96		12	28.086	.5379	+21	20	6.00	.065	2	2	
531	5.5	5.7	01.98		13	32.380	.5286	+20	54	1.72	+ 8.981	2	2	
532	5.4	5.4	02.01		13	41.466	.5439	+21	31	54.69	.969	2	2	
533	3.9		02.02		14	6.129	.4015	+15	23	10.11	.937	2	2	*Fund.*
			03.99			6.100				10 01		2	2	
534	7.3	7.3	02.10		14	11.374	.4218	+16	16	53.97	.930	1	1	Pr. Mo. (?)
			03.04			11.401				53.51		1	1	
535	5.1		02.03		14	12.164	.6850	+27	6	40.58	.929	1	1	*Fund.*
			03.04			12.121				41.21		1	1	
536	5.9	6.0	03.98		14	36.437	.4731	+18	30	9.98	.898	2	2	Pr. Mo. (?)
537	5.1	5.5	03.08		14	56.093	.3902	+14	51	20.39	.872	2	2	Pr. Mo. (?)
538	5.7		01.98		16	29.754	.6432	+25	23	36.39	.749	2	2	S. p. wide dup.
539	6.5	6.5	02.01		16	29.734	.5240	+20	35	5.19	.749	2	2	
540	4.0		03.13		17	10.054	.4476	+17	18	29.02	.696	2	2	*Fund.*
			03.99			10.037				29.00		2	2	
541	5.9	6.2	02.02		17	38.741	.5290	+20	44	56.26	.658	2	2	
542	5.6	5.6	03.98		17	40.765	.4304	+16	32	37.58	.655	2	2	Pr. Mo. (?)
543	6.2	6.2	03.96		17	57.975	.6111	+24	4	5.71	.633	2	2	
544	4.7	5.5	02.03		18	19 884	.4463	+17	12	44.10	.604	1	1	Pr. Mo. $+^{s}.011$ $0''.00$
			03.04			19.841				44.83		1	1	
545	7.6	7.7	02.10		19	4.750	.6495	+25	31	9.20	.545	1	1	
			03.04			4.800				8.74		1	1	
546	6.5	6.5	03.13		19	7.421	.4842	+18	48	43.41	.542	2	2	Pr. Mo. (?)

No.	Mag.	Epoch	R. A. 1900.0.	Precess.	Decl. 1900 0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
547	4.6	1901.98	4 19 24.480	3.5627	+22 3 54.44	+8.520	2	2	
548	5.5 5.7	02.01	19 27.520	.5605	+21 58 16.65	.515	2	2	
549	4.2	03.08	19 42.259	.4586	+17 41 57.58	.496	2	2	Pr. Mo. +^{s}.010 0″.00
550	4.6 4.5	03.96	20 19.437	.5765	+22 35 12.60	.447	2	2	
551	4.6 4.7	03.98	20 38.890	.4062	+15 23 28.67	.421	2	2	
552	4.9	02.02	20 57.329	.3859	+14 29 14.97	.397	2	2	
553	5.5 5.5	02.03	21 18.567	.5821	+22 46 15.45	.368	1	1	
		03.04	18.592		15.31		1	1	
554	5.7 6.0	02.10	22 4.598	.5489	+21 23 48.20	.307	1	1	
		03.04	4.595		48.53		1	1	
555	5.3 5.0	03.08	22 43.380	.4247	+16 8 10.03	.256	2	2	
556	3.7	01.98	22 46.602	.4907	+18 57 31.13	.251	2	2	*Fund.*
557	8.3 8.0	02.01	22 48.872	.5267	+20 27 17.96	.248	2	2	
558	3.9	03.13	22 51.662	.4157	+15 44 24.12	.245	2	2	
559	3.6	03.98	22 57.139	.4136	+15 38 56.71	.238	2	2	Pr. Mo. +^{s}.009 0″.00
560	6.5 6.5	03.96	23 9.188	.6983	+27 11 0.14	.222	2	2	
561	6.5 6.5	02.02	23 16.501	.4205	+15 56 16.85	.211	2	2	Pr. Mo. +^{s}.011 −0″.04
562	6.5 6.5	02.03	24 6.324	.7192	+27 54 40.21	.146	1	1	
		03.04	6.344		40.36		1	1	
563	7.0	01.98	24 21.654	.6003	+23 22 11.44	.124	2	2	
564	5.6 5.6	02.01	24 26.442	.4094	+15 25 9.63	.119	2	2	Pr. Mo. (?)
565	4.9	02.10	24 50.248	.4224	+15 58 34.73	.087	1	1	N. f. 27^{s}.7
		03.04	50.175		34.98		1	1	
566	5.5 5.5	03.08	24 56.643	.4110	+15 28 27.74	.078	2	2	Pr. Mo. +^{s}.013 −0″.04
567	6.5 6.7	03.13	26 9.008	.4155	+15 38 13.15	+7.982	2	2	
568	7.3 7.5	03.96	26 16.830	.6435	+24 58 18.36	.971	2	2	
569	6.5	03.98	27 45.598	.4673	+17 48 20.47	.852	2	2	Mean dup. 3″.3
570	5.6 5.8	01.98	28 22.458	.7478	+28 45 7.00	.803	2	2	
Anon.	8.3	02.02	28 40.719	.5429	+20 53 51.01	.778	1	1	N. p. pair.
		03.04	40.774		50.55		1	1	
571	7.4 7.0	02.03	28 46.397	.5822	+22 29 1.93	.771	1	1	Dup. 2″.0
		03.04	46.354		1.96		1	1	
572	8.3 8.3	02.06	28 51.789	.5428	+20 53 43.05	.763	2	2	8″ S. f. 11^{s}
572*a*	8.0 8.0	02.01	28 55.081	.4618	+17 32 24.48	.759	2	2	
573	6.5 6.5	03 09	29 50.801	.5137	+19 40 31.50	.684	2	2	
		03.99	50.786		31.40		2	2	
574	1.0	03.96	30 10.922	.4337	+16 18 28.57	.657	2	2	*Fund.*
575	6.5 6.5	03.98	30 27.729	.6004	+23 8 13.15	.634	2	2	Pr. Mo. +^{s}.013 +0″.01
575*a*	8.6 8.1	02.02	30 35.845	.7003	+26 55 52.77	.623	2	2	Pr. Mo. (?)
576	7.3 7.5	03 13	30 56.272	.7223	+27 43 18.73	.596	2	2	
576*a*	7.3 7.3	01.98	31 17.426	.6633	+25 31 29.35	.567	2	2	
577	6.5 6.5	03.08	31 26.053	.4827	+18 20 23.39	.556	2	2	
579	5.8 5 9	02.01	32 21.798	.5355	+20 29 1.94	.480	2	2	
580	6.5 6.5	02.03	32 25.947	.4240	+15 49 58.10	.475	1	1	
		03.04	25.935		58.04		1	1	
581	6.3 6.5	03.96	33 17.221	.6520	+25 1 11.11	.405	2	2	
582	5.1 5.1	02.02	33 26.582	.4193	+15 36 10.08	.392	2	2	
583	4.8 4.8	02.10	33 33.224	.4221	+15 43 12.01	.384	1	1	
		03.04	33.259		11.52		1	1	
584	8.2 8.0	03.13	34 5.843	.4596	+17 17 31.56	.339	2	2	
585	5.9 6.0	01.98	35 4.136	.7465	+28 25 16.29	.260	2	2	
586	8.8 8.8	03.08	36 3.132	.5592	+21 18 58.70	.180	2	2	
587	4.4	02.01	36 14.559	.5961	+22 45 54.66	.164	2	2	*Fund.*
		03.14	14.502		54.65		1	1	
		03.98	14.517		54.90		2	2	
588	6.8 6.8	02.03	37 1.353	.4913	+18 31 56.47	.101	1	1	Pr. Mo. (?)
		03.04	1.385		55.80		1	1	
589	6.8 6.8	02.10	37 10.433	.6263	+23 53 58.01	.089	1	1	
		03.04	10.497		58.33		1	1	
590	8.5 8 5	03.13	37 11.616	.5382	+20 26 21.38	.086	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.	
				h m s	s	° ′ ″	″				
591	8.3	8.3	1903.96	4 37 12.260	3.4574	+17 7 15.18	+7.085	2	2		
592	8.0	8.0	02.02	37 22.067	.7234	+27 30 19.03	.072	2	2	Pr. Mo. +ˢ.003	−0″.34
593	7.0	7.0	01.98	39 40.144	.6167	+23 26 38.65	+6.884	2	2		
594	7.5	7.6	02.01	40 3.341	.6810	+25 51 11.51	.852	2	2		
595	8.3	8.3	02.03	40 19.126	.7326	+27 43 5.67	.830	1	1		
			03 04	19.096		6.09		1	1		
596	6.5	6.3	02.10	40 26.483	.4942	+18 33 13.78	.820	1	1	Pr. Mo. +ˢ.010	−0″.10
			03.04	26.445		13.31		1	1		
597	8.2	8.2	03.08	40 44.153	.5129	+19 18 44.25	.796	2	2		
598	8.7	9.0	03.13	41 15.413	.5369	+20 15 44.36	.753	2	2		
599	6.3	6.3	03.96	42 0.934	.7723	+29 3 31.05	.691	2	2		
600	8.0	8.0	03.98	42 30.016	.6486	+24 33 58.64	.650	2	2		
601	8.0	7.5	01.98	42 47.381	.5600	+21 8 20.07	.627	2	2		
602	8.5	8.5	02.01	43 45.744	.6143	+23 13 19.44	.546	2	2		
603	6.5	6.3	02.02	44 0.795	.4282	+15 43 46.48	.525	2	2		
604	7.0	7.2	03.08	44 36.897	.4597	+17 1 48.57	.476	2	2		
605	5.1	5.5	03.13	45 31.421	.5003	+18 40 11.16	.401	2	2		
606	6.0		01.98	46 32.275	.7391	−27 43 48.46	.316	2	2	*Fund.*	
			02.10	32.269		48.15		4	4		
			03.04	32.299		48.43		2	2		
			03.98	32.280		48.19		2	2		
607	7.3	7.4	02.01	46 46.829	.7080	+26 36 40.19	.296	2	2		
608	7.5	7.3	03.96	47 28.794	.6700	+25 12 2.12	.238	2	2		
609	6.5	6.4	03.13	47 32.043	.6153	+23 8 57.75	.233	2	2		
610	8.5	8.5	02.10	48 48.122	.5592	+20 56 12.90	.128	1	1		
			03.04	48.081		13.07		1	1		
611	8.5	8.5	03.08	49 16.951	.5396	+20 9 7.04	.088	2	2		
612	7.3	7.0	01.98	50 6.036	.5982	−22 25 3.57	.019	2	2		
613	6.5	6.5	02.01	50 10.083	.6515	+24 25 57.61	.014	2	2		
614	5.8	5.5	02.02	51 35.736	.4628	+16 59 47.88	+5.894	2	2		
615	6.0	6.0	02.03	51 44.572	.6356	+23 47 33.21	.882	1	1		
			03.04	44.550		33.17		1	1		
616	5.7	5.7	02.10	52 2.179	.6655	+24 53 46.20	.858	1	1		
			03.04	2 141		45.77		1	1		
617	8.8	9.0	03.08	52 30.197	.5086	+18 50 19.21	.819	2	2		
618	8.0	7.8	01.98	53 27.646	.6910	+25 47 9.46	.738	2	2		
619	7.2	7.2	02.01	53 40.094	.7299	+27 10 28.35	.721	2	2	N. f. wide pair.	
620	8.2	8.2	02.02	54 50.358	.7889	+29 11 10.31	.624	2	2		
621	8.6	8.5	02.03	55 27.743	.6161	+22 57 24.81	.571	1	1		
			03.04	27.803		24.53		1	1		
622	8.8	8.8	02.10	55 59.331	.5353	+19 49 10.71	.527	1	1		
			03.04	59.336		10.65		1	1		
623	4.7		02.01	57 7.092	.5777	+21 26 49.81	.432	2	2	*Fund.*	
			03.10	7.071		49.70		4	4		
			03.97	7.078		49.81		4	4		
624	8.0	8.0	01.98	57 43.835	.6681	+24 50 1.14	.380	2	2		
625	6.5	6.5	02.02	58 22.797	.7447	+27 33 23.57	.325	2	2		
626	8.8	8.8	02.03	59 5.190	.4825	+17 38 37.19	.266	1	1		
			03.04	5.244		37.25		1	1		
627	7.5	7.3	02.10	59 35.485	.6180	+22 55 23.98	.223	1	1		
			03.04	35.500		23.81		1	1		
628	6.5	6.7	03.08	59 38.456	.5336	+19 40 8 72	.219	2	2		
629	6.5	6.5	03.13	59 41.957	.7099	+26 17 33.21	.214	2	2		
630	8.3	8.3	01.98	5 1 14.744	.4601	+16 41 39.67	.083	2	2	Pr. Mo. (?)	
631	5.1	5.1	02.01	1 32.410	.5053	+18 30 38.81	.059	2	2	Pr. Mo. +ˢ.037	+0″.03
632	5.5		02.02	1 53.304	.5505	+20 17 11.83	.029	2	2		
633	5.8	5.8	03.96	1 56.654	.5839	+21 34 21.30	.024	2	2		
634	5.5	5.5	02.03	2 0.959	.6520	+24 7 59.48	.018	1	1		
			03.04	0.968		59.07		1	1		
635	6.5	6.6	02.10	2 56.360	.5369	+19 43 48.25	+4.940	1	1		

No.	Mag.		Epoch.	R.A. 1900.0			Precess.	Decl. 1900.0			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
635			1903.04	5	2	56.359		+19	43	48.00		1	1	
636	6.5	6.4	03.08		3	21.689	3.8105	+29	40	11.30	+4.904	2	2	
637	6.2	6.2	03.13		3	28.349	.7586	+27	54	11.96	.894	2	2	S. p. wide dup.
638	5.0	5.0	03.98		3	58.508	.4312	+15	28	10.55	.852	2	2	
639	8.3	8.3	03.99		4	36.537	.6780	+25	1	14.17	.798	2	2	Pr. Mo. (?)
640	8.8	8.8	02.02		4	56.022	.6256	+23	4	57.75	.770	2	2	
641	5.3	5.5	02.10		5	56.918	.4430	+15	55	19.94	.684	1	1	
			03.04			56.941				19.55		1	1	
642	7.0	7.0	02.03		6	10.064	.7158	+26	20	10.71	.666	1	1	Pr. Mo. (?)
			03.04			10.056				11.17		1	1	
643	8.7	8.5	03.08		6	42.431	.4722	+17	5	31.35	.620	2	2	
644	7.7	7.7	02.02		8	7.799	.5750	+21	6	21.39	.498	2	2	S. f. 18ˢ
645	7.5	7.6	02.10		9	16.285	.5454	+19	56	30.73	.401	1	1	
			03.04			16.346				30.46		1	1	
646	6.8		02.03		9	27.006	.6037	+22	10	12.92	.386	1	1	*Fund.*
			03.04			27.019				12.77		1	1	
			03.98			27.003				13.38		4	4	
646*a*	8.9	9.0	03.08		9	58.023	.5095	+18	31	28.96	.342	2	2	
647	8.8	8.8	03.13		10	36.473	.7550	+27	36	21.29	.287	2	2	
649	6.5	6.5	03.98		10	56.035	.7901	+28	47	39.54	.259	2	2	
650	6.8	6.8	03.99		11	26.416	.6514	+23	54	7.21	.216	2	2	
651	7.8	7.3	02.02		12	32.090	.5924	+21	41	7.01	.122	2	2	
652	5.2		02.10		13	15.995	.6009	+21	59	35.03	.059	1	1	*Fund.*
			03.04			16.092				34.98		1	1	
			04.02			16.054				35.02		2	2	
653	6.5	6.5	02.03		13	19.762	.5494	+20	1	46.86	.054	1	1	
			03.04			19.679				47.17		1	1	
654	8.8	9.1	03.08		13	34.946	.7152	+26	9	15.80	.032	2	2	
655	7.9	7.8	03.96		14	9 226	.6850	+25	4	5.63	+3.983	2	2	
656	6.5	6.5	03.13		14	24.383	.5356	+19	28	32.18	.962	2	2	
657	6.5	6.4	03.98		14	42.570	.7649	+27	51	21.22	.936	2	2	
658	5.6	5.6	02.02		14	51.007	.8129	+29	28	5.94	.924	2	2	
659	6.5	6.5	03.99		15	2.139	.5420	+19	42	47.05	.908	2	2	
660	7.8	7.5	03.99		15	47.740	.5191	+18	48	26.65	.842	2	3	
661	5.2		02.02		18	35.357	.4816	+17	17	25.64	.603	2	2	Pr. Mo. +ˢ.015 0″.00
662	8.8	9.0	02.03		18	43.932	.6439	+23	29	43.52	.590	1	1	
			03.04			43.958				43.54		1	1	
663*	7.5	7.3	02.10		19	13.769	.5639	+20	29	32.92	.547	1	1	
			03.04			13.739				32.54		1	1	
664	8.0	8.1	03.08		19	51.127	.7048	+25	40	12.09	.494	2	2	
665	1.9		03.98		19	58.217	.7876	+28	31	22.03	.484	4	4	*Fund.*
666	7.8	7.8	03.13		20	44.963	.7586	+27	31	23.12	.416	2	2	
667	5.4	5.7	03.96		21	20.058	.4973	+17	52	34.37	.366	2	2	
668*	4.8		02.02		21	37.697	.6008	+21	51	5.63	.340	2	2	*Fund.*
			03.99			37.681				5.77		2	2	
			04.02			37.725				5.78		2	2	
669*	7.8		02.03		21	51.417	.6375	+23	12	33.70	.321	1	1	
			03.04			51.381				33.78		1	1	
670	6.5		02.10		22	13.330	.4794	+17	9	21.52	.290	1	1	
			03.04			13.336				21.60		1	1	
671	5.4	6.0	03.08		23	7.239	.6894	+25	4	10.16	.212	2	2	N. f. dup. 10″
672*	8.7	8.5	03.13		24	8.817	.5871	+21	18	4.35	.123	2	2	
673	8.3	8.5	02.02		25	52.172	.5396	+19	28	33.05	+2.975	2	2	
674	7.8	7.8	02.03		25	53.158	.8087	+29	7	15.92	.974	1	1	
			03.04			53.160				16.29		1	1	
675	7.3	7.4	02.10		26	12.961	.7433	+26	54	28.86	.945	1	1	
			03.04			13.017				28.44		1	1	
676	4.6		03.96		26	20.972	.5152	+18	31	11.30	.933	2	2	
677	5.5	6.0	03.99		26	26.310	.4762	+16	59	2.47	.925	2	2	N. p. dup. 10″
678	5.3	5.5	03.98		27	39.947	.5143	+18	28	8.37	.819	2	2	
679*	6.3	6.3	04.02		27	42.158	.5645	+20	24	11.74	.816	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
680*	8.3 8.3	1902.02	5 28 53.748	3.6208	+22 30 3.35	+2.712	2 2	
681	5.4 5.5	02.03	29 20.645	.6613	+23 58 23.65	.673	1 1	
		03.04	20.662		24.01		1 1	
682	7.1 6.4	03.08	29 38.965	.7648	+27 35 49.03	.647	2 2	
683	8.3 8.4	03.13	29 50.082	.6813	+24 41 0.08	.631	2 2	
684	6.6 6.5	03.96	30 18.381	.7151	+25 52 29.71	.590	2 2	
685	6.7 6.5	04.02	30 54.106	.7438	+26 51 42.70	.538	2 2	
686	5.4 5.5	03.98	31 15.557	.4772	+16 58 42.64	.508	2 2	
687	8.8 8.5	03.99	31 39.469	.5477	+19 43 5.21	.473	2 2	
688*	3.0	02.10	31 40.112	.5836	+21 4 54.10	.472	1 1	*Fund.*
		03.10	40.066		53.66		6 6	
689	6.2 6.2	02.02	32 56.756	.8128	+29 9 26.61	.361	2 2	
690	4.9 5.0	02.03	33 32.372	.7153	+25 50 27.45	.310	1 1	
		03.04	32.392		27.71		1 1	
691	8.3 8.1	02.10	35 15.946	.5562	+20 0 35.22	.159	1 1	
		03.09	15.966		35.51		1 1	
692	4.9 5.0	03.96	35 30.938	.4655	+16 28 54.88	.138	2 2	
693	8.0 7.5	03.99	35 33.361	.4905	+17 28 12.31	.134	2 2	
694	7.8 7.5	03.98	35 49.849	.6715	+24 16 2.51	.110	2 2	
695*	6.8 6.5	02.02	36 1.204	.6259	+22 36 36.64	.094	2 2	
696	7.1 6.9	02.03	37 0.684	.5284	+18 55 55.00	.008	1 1	
		03.04	0.753		55.43		1 1	
697*	6.0 6.1	03.13	37 15.146	.6411	+23 9 24.74	+1.987	2 2	
698*	8.3 8.3	03.08	37 22.555	.5927	+21 22 8.43	.976	2 2	
699	7.8 7.6	02.10	38 3.931	.7704	+27 41 9.41	.915	1 1	N. f. dup. 10″
		03.09	3.909		9.30		2 2	
700	7.4 7.0	03.96	38 42.393	.7300	+26 17 54.34	.860	2 2	S. f. pair 25^{s}
701	6.9 7.0	02.02	39 7.578	.4550	+16 2 33.31	.823	2 2	
702	7.3 7.3	03.13	40 49.832	.5606	+20 8 3.91	.675	2 2	
703*	8.2 7.9	03.98	41 12.587	.6238	+22 29 28.08	.642	2 2	
704	6.6 6.5	03.99	41 23.598	.7086	+25 31 52.12	.626	2 2	
705	5.5	02.06	41 36.367	.4973	+17 41 30.06	.607	2 2	*Fund.*
		03.07	36.372		30.04		5 5	
706*	7.4 7.3	03.96	41 40.303	.5812	+20 54 16.14	.602	2 2	
707	5.1 5.0	02.02	42 52.744	.6806	+24 32 2.35	.496	2 2	
708	7.8 7.6	03.98	42 53.857	.8323	+29 41 35.26	.494	2 2	Fol. 20^{s}
709	8.1 8.0	02.03	44 14.836	.5349	+19 8 6.42	.377	1 1	Pr. Mo. (?)
		03.04	14.863		6.30		1 1	
710	6.5 6.1	02.10	44 40.000	.7795	+27 56 16.35	.340	1 1	
		03.09	40.020		15.90		2 2	
711*	7.3 7.0	03.08	45 45.809	.6484	+23 21 22.03	.244	2 2	
712	6.1 6.0	02.02	46 27.974	.5537	+19 50 31.52	.183	2 2	
713	8.1 8.1	03.13	46 52.505	.7353	+26 25 15.73	.147	2 2	
714	4.5	03.96	47 2.530	.7696	+27 35 19.14	.133	2 2	
715*	8.5	02.03	47 18 097	.6128	+22 3 2.64	.110	1 1	
		03.04	18.138		2.22		1 1	
716	7.3 7.3	03.98	47 20.599	.6960	+25 3 0.85	.107	2 2	
717*	4.7 5.0	02.10	48 27.634	.5650	+20 15 27.84	.009	1 1	Pr. Mo. $-^{s}.015$ $-0''.08$
		03.09	27.642		27.68		2 2	
718	5.9 6 0	03 08	49 1.514	.5510	+19 43 49.17	+0.960	2 2	
719	7.7 7.3	03.13	49 9.371	.4903	+17 22 58.36	.949	2 2	
720	6.5 6.5	03.99	50 12.640	.8102	+28 55 34 56	.856	2 2	
721	6.0 6.0	02.03	50 48.681	.6735	+24 14 5.78	.803	1 1	
		03.04	48.697		5.66		1 1	
722	5.1	02.02	51 47.375	.7221	+25 56 29.55	.718	2 2	*Fund.* Pr. Mo. (?)
		03.96	47.391		28.85		2 2	
Anon.	8.3	03.97	52 39.786	.5284	+18 51 8.92	.641	1 1	Var. (?) 2′ N. p. 22^{s}
		04.03	39.796		8.78		1 1	
723	7.3 7.1	03.13	52 52.995	.4702	+16 35 14.61	.622	2 2	
724*	8.5 8.3	03.99	52 57.722	.5762	+20 40 1.11	.616	2 2	

No.	Mag.		Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
				h m s	s	° ′ ″	″			
725	7.5	7.1	1903.98	5 53 1.969	3.5274	+18 48 39.25	+0.609	1	1	
			04.02	1.970		38.46		1	1	
726*	7.2	7.3	02.10	53 39.425	.6012	+21 35 47.97	.555	1	1	
			03 09	39.396		47.34		2	2	
727*	7.0	7.0	02.03	54 24.503	.6365	+22 53 38.39	.489	1	1	
			03.06	24.575		38.20		3	3	
728	6.8	6.5	03.96	54 43.432	.7699	+27 34 1.43	.462	2	2	
729	6.7	6.5	03.98	55 39.354	.6230	+22 23 53.36	.380	2	2	
730	5.1	5.5	02.02	57 32.241	.5506	+19 41 32.40	.215	2	2	
731	8.3	8.0	02.03	57 56.984	.7920	+28 18 12.66	.180	1	1	
			03.04	57.079		12.76		1	1	
732	4.8		03.96	57 58.863	.5625	+20 8 26.68	.176	2	2	
733	7.3	7.0	03.13	58 0.776	.4842	+17 7 45.13	.174	2	2	
735	6.9	6.8	03.99	58 1.167	.7083	+25 26 51.98	.173	2	2	
734*	4.3		02.10	58 2.582	.6470	+23 16 7.48	.171	1	1	*Fund.*
			03.14	2.501		7.13		5	5	
			04.03	2.497		7.45		3	3	
736	8.7	8.5	03.08	59 1.631	.6772	+24 20 59.77	.086	2	2	
737	8.8	8.8	02.02	59 7.467	.5148	+18 18 57.96	.076	2	2	Dup. 2″
738	6.2	6.2	03.98	59 59.452	.8291	+29 31 12.71	+0.001	2	2	
739	8.2	8.0	03.03	6 0 42.196	.6095	+21 53 46.29	−0.061	2	2	
740	7.2	7.1	03.16	0 42.897	.6576	+23 38 51.97	.063	2	2	
741	7.0	7.0	02.03	1 5.494	.7443	+26 41 32.35	.096	1	1	N. f. 10^{s}
			03.04	5.530		33.28		1	1	
742	8.0	8.1	03.99	1 10.100	.4603	+16 11 15.25	.101	2	2	
743	8.2	8.0	03.96	1 42.268	.7662	+27 26 32.75	.149	2	2	Fol. $21^{\mathrm{s}}.8$
744	6.5	6.1	03.19	3 30.692	.6178	+22 12 22.92	.308	1	1	
			04.04	30.697		23.40		1	1	
745	6.5	7.0	02.10	3 39.664	.6431	+23 7 47.54	.320	1	1	(Fund.)
			03.09	39.679		47.65		2	2	
746	8.3	8.1	03.13	4 4.509	.5506	+19 41 35.29	.357	2	2	
747	7.4	7.1	03.98	4 40.593	.7251	+26 2 2.20	.409	2	2	
748	7.5	7 5	03.96	4 53.941	.8107	+28 55 37.83	.429	2	2	
749	6.8	6.6	03.19	5 10.721	.5103	+18 9 1.05	.453	1	1	
			04.04	10.734		0.79		1	1	
750	6.7	6.6	02.10	5 24.375	.6796	+24 26 32.33	.473	1	1	
			03.09	24.364		31.32		2	2	
751	7.0	7.0	03.08	5 24.909	.5832	+20 55 33.30	.474	2	2	
752	8.2	8.4	03.16	5 31.241	.7577	+27 9 16.13	.483	2	2	
753	7.3	7.7	04.01	5 49.944	.4910	+17 23 57.03	.510	2	2	N. p. dup.
754	5.6	5.6	04.02	6 5.941	.5537	+19 48 46.30	.533	2	2	
755	6.7	6.4	03.13	6 15.392	.6375	+22 55 52.04	.547	2	2	
756	5.8	5.6	03.98	6 17.300	.4593	+16 9 11.40	.550	2	2	
757	6.5	6.6	03.16	7 40.729	.5246	+18 42 23.92	.671	2	2	
758	6.5	6.5	02.10	8 38.170	.5046	+17 56 4.32	.755	1	1	
			03.09	38.208		4.42		2	2	
759	var.		03.08	8 50.520	.6265	+22 32 8 92	.773	2	2	*Fund.*
760	5.1	5.5	03.19	8 57.805	.5371	+19 11 25.63	.784	1	1	Pr. Mo. $+^{\mathrm{s}}.001$ −0″.20
			04.04	57.865		25.24		1	1	
761	4.5		03.96	9 0.350	.8290	+29 32 5.00	.787	2	2	*Fund.*
762	7.6	7.5	03.13	9 14.259	.7054	+25 21 49.29	.808	2	2	
763	8.0	8.0	03.99	9 36.819	.7792	+27 53 35.93	.842	2	2	
764	6.5	6.4	03.98	10 12.500	.6668	+24 0 9.02	.893	2	2	
765	6.5	6.4	04.02	10 35.228	.4860	+17 12 52.50	.926	2	2	
766	6.8	6.8	03.16	10 52.679	.6604	+23 46 29.22	.952	2	2	
767	8.7	8.7	02.10	11 30.998	.5805	+20 50 35.11	−1.007	1	1	
			03.09	30.920		34.68		2	2	
768	7.1	7.2	03.08	12 4.890	.7597	+27 14 55.97	.057	2	2	
769	7.0	6.6	03.13	12 48.848	65.65	+23 38 31.08	.120	2	2	
770	6.5	6.5	03.19	13 12.973	.4896	+17 21 52.58	.156	1	1	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
770		1904.04	6 13 12 922		+17 21 53.03		1	1	
771	8.6 8.5	03.96	13 23.534	3.5293	+18 54 29.11	−1.170	2	2	
772	7.2 7.2	03.98	14 26.395	.7009	+25 13 54 36	.262	2	2	
773	6.0 6.0	03.99	14 49.014	.8295	+29 35 9.06	.295	2	2	
774	7.5 8.0	02.10	15 15.676	.5889	+21 10 36.37	.335	1	1	
		03 09	15.736		36.23		2	2	
775	6.5 6.5	04.02	15 35.820	.5007	+17 48 34.84	.362	2	2	
776	7.5 7.1	03.19	15 40.140	.5560	+19 56 15.16	.370	1	1	
		04.04	40.101		14.54		1	1	
777	7.7 7.5	03.08	15 43.129	.6606	+23 48 25.49	.375	2	2	
778	8.3 8.5	03.96	16 11.455	.7435	+26 43 14 64	.415	2	2	N. p. pair.
779	3.2	03.14	16 54.679	.6262	+22 33 53.72	.478	4	4	*Fund.*
780	6.5 6.5	03.98	18 34.212	.6964	+25 6 4.69	.622	2	2	
781	7.7 7.7	03.99	18 41.180	.7831	+28 5 7.10	.632	2	2	
782	7.2 6.9	02.10	19 42.667	.6022	+21 42 1.90	.722	1	1	
		03.15	42.648		2.11		2	2	
p	8.5 8.1	03.08	20 13.906	.6313	+22 46 33.30	.767	2	2	
783	7.4 7.3	03.19	20 18.534	.5260	+18 49 4.50	.774	1	1	Pr. Mo. −^{s}.010 −0″.15
		04.04	18.481		4.44		1	1	
784	7.7 7.6	03.98	21 19.616	.5926	+21 21 12.25	.863	3	3	
785	8.2 8.0	03.13	21 53.153	.6572	+23 43 45.84	.912	2	2	
786	6.8 6.6	02.10	21 59.867	.5712	+20 33 23.52	.921	1	1	
		03.09	59.866		23.48		2	2	
787	7.0 7.0	03.16	22 40.809	.7509	+27 1 55.86	.981	2	2	
788	4.0	03.98	23 1.577	.5636	+20 16 31.71	−2.011	6	6	*Fund.*
		04.02	1.572		31.53		2	2	
789	6.8 6.8	03.08	24 3.508	.7874	+28 16 42.02	.100	2	2	
790	8.3 8.3	03.13	24 22.322	.8364	+29 53 45.56	.127	2	2	
791	6.3 6.3	03.19	25 22.305	.4787	+17 0 30.23	.214	1	1	
		04.04	22.304		30.07		1	1	
792	7.2 7.7	02.10	25 58.005	.6158	+22 15 22.08	.266	1	1	
		03.09	58.025		22.47		2	2	
793	6.5 6.5	03.16	26 28.437	.5000	+17 51 17 73	.310	2	2	N. f. wide dup.
794	8.3 8.6	03.08	27 0.124	.7012	+25 21 11.91	.355	2	2	S. p. 1^{s}
795	8.8 8 8	03.13	27 11.965	.6664	+24 6 54.28	.374	2	2	
796	7.2 7.4	03.19	28 45.199	.5420	+19 30 22.21	.508	1	1	
		04.04	45.190		22.49		1	1	
797	4.9	03.96	28 54 243	.7803	+28 6 0.96	.521	2	2	
798	8.0 8.2	02.10	29 38.810	.5803	+20 58 8.69	.586	1	1	
		03.09	38.778		9.03		2	2	
799	7.7 7.5	03.08	30 4.342	.4971	+17 46 21.77	.623	2	2	
800	7 4 7.2	03.13	30 38.618	.6395	+23 10 46.97	.672	2	2	
801	6.7 6 7	03.16	31 19.461	.6806	+24 40 26 16	.731	2	2	
802	2.0	03.19	31 56.091	.4640	+16 29 4.15	.784	1	1	*Fund.*
		04.02	56.137		4.42		3	3	
803	5.5	03.96	32 2.568	.8080	+29 4 11.50	.794	2	2	
804	8.7 8.4	03.98	32 26.738	.7345	+26 35 9.81	.829	2	2	4′ N. f. 49^{s}
805	7.0 6.6	02 10	33 4.388	.6099	+22 7 7.92	.883	1	1	
		03.09	4.403		7.54		2	2	
806	5.7 5.9	03.99	33 14.815	.7859	+28 21 5.33	.898	2	2	
807	7.8 7.8	03.08	34 0.091	.6543	+23 45 49.71	.963	2	2	
z	8.0 8.0	03.13	34 2.564	.5685	+20 34 35.81	.967	2	2	
808	7.5 7.4	04.02	34 7.630	.5468	+19 44 58.27	.974	2	2	
809	6.5 6.5	03.16	35 2.783	.7832	+28 17 20.53	−3.053	2	2	
810	7.5 7.5	03.19	35 28.089	.7503	+27 10 29.67	.090	1	1	
		04.04	28.060		29.47		1	1	
811	5.1	03.96	36 34.970	.4945	+17 44 34.84	.186	2	2	Pr. Mo. ^{s}.000 −0″.08
812	3.2	03.98	37 46.831	.6935	+25 13 49.00	.290	4	4	*Fund.*
		04.02	46.833		49.03		2	2	
813	5.4 5.7	03.13	38 25.306	.8049	+29 4 18.93	.345	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
814	7.1 7.2	1902.10	6 38 33.066	3.5727	+20 47 36.72	−3.356	1	1	
		03.09	33.056		36.81		2	2	
815	7.2 7.2	03.08	38 53.734	.6298	+22 56 19.43	.386	2	2	
816	8.2 8.2	03.96	38 58.604	.5421	+19 37 43.31	.393	2	2	
817	7.3 7.0	03.19	40 6.289	.6439	+23 28 27.02	.490	1	1	
		04 04	6.258		26.96		1	1	
818	8.7 8.4	02.10	40 16.988	.5943	+21 38 12.57	.505	1	1	
		03 11	16.962		12.53		2	2	
819	6.5 6.5	03.13	41 32.917	.5071	+18 18 6.34	.615	2	2	
820	8.0 8.1	03.08	42 22.462	.6703	+24 28 26.94	.685	2	2	Pr. Mo. (?)
821	7.2 7.2	03.16	42 55.507	.7501	+27 18 9.50	.732	2	2	
822	7.9 8.0	02.10	43 44.555	.5314	+19 16 51.09	.803	1	1	
		03.09	44.553		50.45		2	2	
823	5.4 5.7	03.19	44 4.465	.4564	+16 18 59.06	.831	1	1	
		04.04	4.498		58.73		1	1	
824	8.3 8.3	03.96	44 17.428	.4910	+17 42 15.22	.850	2	2	
825	7.2 7.0	03.13	44 49.809	.7084	+25 52 52.19	.897	2	2	Pr. Mo. (?)
826	5.2 5.5	03.08	45 33.537	.5985	+21 52 45.49	.958	2	2	
827	8.5 8.3	03.98	45 55.114	.5608	+20 27 13.80	.990	2	2	
828	6.5 6.0	03.16	45 55.747	.6478	+23 43 12.10	.991	2	2	
829	7.3 6.9	02.10	48 23.264	.5815	+21 17 11.78	−4.201	1	1	
		03.09	23.271		11.51		2	2	
830	6.8 6.8	03.08	48 36.957	.6642	+24 22 21.37	.220	2	2	Pr. Mo. (?)
831	6.2 6.2	03.13	49 9.739	.6952	+25 30 2.89	.268	2	2	
832	7.5 7.5	03.16	49 41.725	.7493	+27 24 47.81	.313	2	2	3′ N. f. 8^{s}
833	7.0 7.1	02.10	50 27.676	.4927	+17 52 1.00	.378	1	1	
		03.09	27.645		0.52		2	2	
834	7.3 7.4	03 08	52 10.314	.6145	+22 36 22 05	.524	2	2	Pr. Mo. (?)
835	6.5 6.6	03.13	52 37.631	.7130	+26 12 44.69	.562	2	2	Pr. Mo. −^{s}.013 +0″.08
836	7.4 7.3	03.16	52 39.290	.5294	+19 21 21.36	.566	2	2	
837	6.5 6.5	03.19	53 17.529	.7080	+26 2 59.86	.619	1	1	
		04.04	17.523		59.48		1	1	
838	8.2 8.1	02.10	53 27. . .	.5606	+20 34 51.28	.633	. .	1	
		03.09	27.233		50.92		2	2	
839	5.9	03.96	54 31.046	.4501	+16 13 1.06	.724	2	2	
840	7.3 7.5	03.98	54 44.210	.7425	+27 17 46.42	.742	2	2	
841	8.0 8.0	03.99	56 6.348	.5946	+21 56 24.44	.858	2	2	
842	5.3 5.4	04.02	56 19.264	.6592	+24 21 29 15	.877	2	2	
843	6.2 6.1	03 08	56 36.551	.4909	+17 53 52.08	.901	2	2	
844	6.5 6.4	03.19	56 47.208	.4639	+16 49 4.46	.916	1	1	
		04.04	47.214		4.23		1	1	
845	6.0	03.96	57 9.223	.8052	+29 30 14.14	.947	2	2	Pr. Mo. +^{s}.013 −0″.80
846	8.0 8.1	03.98	57 23.538	.7364	+27 9 2.22	.967	2	2	
847	7.3 7.4	03.99	57 37.372	.5274	+19 22 5.36	.986	2	2	
848	var.	02 10	58 10.703	.5616	+20 43 1.42	−5.034	1	1	*Fund.*
		03.11	10.731		1.62		8	8	
		04.08	10.646		1.38		2	2	
849	5.9 6.1	04.02	59 17.241	.6151	+22 47 14.43	.128	2	2	
850	8.3 8.3	03.19	59 54.661	.7013	+25 58 23.76	1.81	1	1	
		04.04	54.703		22.56		1	1	
851	6.8 6.7	02.10	7 1 8.631	.7674	+28 19 50.02	.285	1	1	
		03.09	8.618		50.20		2	2	
852	7.1	03.08	1 11.804	.6548	+24 19 23.20	.290	2	2	
853	5.6 5.7	03.13	2 37.973	.4435	+16 5 25.07	.411	2	2	Pr. Mo. ^{s}.000 −0″.10
854	7.3 7.4	03.16	2 55.577	.4857	+17 48 54.53	.435	2	2	
855	7.4 7.3	03.19	3 15.786	.5329	+19 42 20.94	.464	1	1	
		04.04	15.789		20.46		1	1	
856	7.0 7.0	03.98	3 27.134	.6964	+25 53 33.62	.479	2	2	S. p. Pr. Mo. −^{s}.008 −0″.19
857	7.0 7.0	02.10	4 10.627	.5762	+21 25 13.97	.540	1	1	Pr. Mo. − .011 −0 .50
		03.09	10.623		14.01		2	2	

No.	Mag.	Epoch.	R. A. 1900.0	Precess.	Decl. 1900.0	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
858	5.5 5.5	1904.08	7 5 11.046	3.7265	+27 1 14.61	−5.625	2	2	
859	7.0 7.0	03.99	6 0.316	.4676	+17 8 32.00	.694	2	2	
860	5.8 5.9	04.02	6 21.842	.6505	+24 17 45.04	.724	2	2	
861	5.4	02.10	7 37.805	.4469	+16 19 42.68	.830	1	1	*Fund.*
		03 11	37.802		42.84		8	8	
		03.98	37.770		42.64		2	2	
		04.09	37.721		42.69		2	2	
862	6.3 6.0	03.19	8 35.071	.6694	+25 3 31.38	.910	1	1	Pr. Mo. +$^{\mathrm{s}}$.004 −0″.10
		04.04	35.063		30.64		1	1	
863	8.0 7.8	04.08	8 39.030	.5545	+20 41 17.56	.916	2	2	
864	7.8 7.8	03.99	8 50.724	.6217	+23 16 58.64	.933	2	2	
865	8.1 7.8	03.16	9 0.529	.5052	+18 44 2.16	.946	2	2	
866	7.2 7.2	03.08	9 34.998	.5912	+22 8 24.96	.994	2	2	
867	6.5 6.5	03.13	9 42.533	.7524	+28 4 16.65	−6.004	2	2	
868	6.5 6.5	02.10	10 51.751	.7173	+26 52 10.67	.100	1	1	Pr. Mo. +$^{\mathrm{s}}$.005 0″.17
		03.09	51.792		10.18		2	2	
869	3.6	03.19	12 20.827	45.40	+16 43 14.24	.224	1	1	*Fund.*
		04.05	20.768		14.65		5	5	
870	8.3 8.5	04.08	12 47.488	.6456	+24 17 58.26	.261	2	2	
871	3.7	02.10	14 9.089	.5886	+22 9 59.04	.373	1	1	*Fund.*
		03.11	9 097		59.49		8	8	
		03.99	9.065		59.86		2	2	
872	7.7 7.6	04.09	14 10.154	.5261	+19 42 19.80	.375	2	2	
873	8.5 8.5	04.02	14 55.360	.6857	+25 51 17.47	.437	2	2	
874	5.0 5.0	03.19	16 2.841	.5481	+20 37 57.21	.530	1	1	
		04.04	2.859		56.56		1	1	
875	7.0 7.0	03.16	17 15.935	.4935	+18 27 55.28	.631	2	2	
876	7.7 7.5	04.08	17 18.881	.4723	+17 36 2.64	.636	2	2	
877	5.0 5.2	03.99	17 22.775	.6669	+25 14 34.37	.641	2	2	
878	6.1 6.4	04.09	17 27.680	.6112	+23 8 16.26	.648	2	2	
879	8.8 8.8	04.02	18 38.372	.7087	+26 49 18.42	.744	2	2	
880	4.0 4.0	04.08	19 30.990	.7405	+27 59 47 99	.817	2	2	(Fund.)
881	8.3 8.5	03.16	20 55.513	.6340	+24 7 37.74	.932	2	2	
882	5.7 5.7	03.19	21 2 717	.5400	+20 27 26.90	.943	1	1	
		04.04	2.706		26.72		1	1	
883	5.3 5.3	03 99	21 48.264	.5694	+21 38 58.99	−7.004	2	2	Pr. Mo. −$^{\mathrm{s}}$.003 −0″.11
884	7.3 7.3	04.02	21 52.081	.6947	+26 25 44.65	.009	2	2	
885	7.2 7.2	04.09	21 59.458	.5095	+19 14 54.39	.020	2	2	Pr. Mo. (?)
886	5.1 5.0	03.19	23 6.652	.7458	+28 19 27.03	.113	1	1	
		04.04	6.688		26.75		1	1	
Anon.	8.3	04.08	23 21.412	.7124	+27 8 0.48	.131	1	1	
887	5.1 5.4	04.12	23 35.616	.7396	+28 7 21.19	.151	2	2	
888	8.1 8.2	04.09	23 44 666	.4390	+16 22 10.99	.163	2	2	
889	7.5 7.5	03.16	24 30.765	.5267	+20 1 29.10	.226	2	2	Pr. Mo. (?)
Anon.	8.6 8.1	04.01	25 44.515	.6456	+24 44 44.99	.327	2	2	N. p.
890	8.2 7.9	04.02	25 50.709	.6448	+24 42 51.17	.335	2	2	S. f.
891	5.6 5.5	04.03	26 2.478	.4596	+17 17 55.63	.350	2	2	Pr. Mo. +$^{\mathrm{s}}$.001 −0″.08
892	8.1 8.0	03 19	26 38.512	.4898	+18 34 45.15	.399	1	1	
		04.04	38.506		44.51		1	1	
893	7.1 7.1	04.12	26 38.618	.5646	+21 37 15.04	.400	2	2	
894	6.0 6.4	04.09	26 51.053	.6020	+23 6 2.61	.416	2	2	
895	8.7 8.6	03.16	27 36.473	.6669	+25 36 54.52	.477	2	2	
896	5.0 5.7	04.02	27 54.076	.4287	+16 2 30.24	.502	2	2	
897	4.2	03.19	29 45.729	.7049	+27 7 3.88	.653	1	1	Pr. Mo. $^{\mathrm{s}}$.000 −0″.10
		04.04	45.683		4.50		1	1	
898	7.0 6.8	03.16	31 12.766	.5301	+20 22 56.06	.770	2	2	Pr. Mo. $^{\mathrm{s}}$.000 −0″.08
899	7.0 7.0	04.02	31 41.102	.4996	+19 8 36.63	.808	2	2	Pr. Mo. − .002 −0 .06
900	7.0 7.0	03.99	32 11.345	.6350	+24 35 5.00	.848	2	2	
901	8.8 8.5	03.19	33 12.593	.4318	+16 19 23.79	.930	1	1	
		04.04	12 507		23.61		1	1	

No.	Mag.		Epoch.	R. A. 1900.0	Precess.	Decl. 1900.0	Precess.	Obs.		Notes.
				h m s	s	° ′ ″	″			
902	5.2		1904.07	7 33 42.154	3.4685	+17 51 8.26	−7.970	3	3	*Fund.*
903	8.0	8.2	04.09	34 33.939	.5080	+19 35 19.42	−8.039	2	2	
904	6.1	6.0	04.02	34 59.345	.5978	+23 14 59.21	.072	2	2	
905	8.5	8.3	04.08	35 10.972	.6719	+26 7 14.26	.089	2	2	
906	8.2	8.1	03.99	35 17.287	.5584	+21 40 45.81	.097	2	2	
907	5.3	5.4	03.16	38 1.008	.6661	+26 1 20.92	.315	2	2	
908	3.6		03.19	38 24.731	.6296	+24 38 16.80	.346	1	1	*Fund.*
			04.05	24.703		16.44		2	2	
909	1.1		04.08	39 11.676	.7247	+28 16 3.72	.408	2	2	*Fund.*
910	6.5	6.5	03.99	39 17.154	.5272	+20 33 22.89	.416	2	2	
911	8.0	7.9	04.02	39 44.790	.6890	+26 58 2.13	.452	2	2	
912	7.5	7.5	04.09	40 13.654	.5459	+21 21 51.92	.491	2	2	
913	5.1	5.5	03.16	40 20.117	.4833	+18 45 14.75	.498	2	2	
914	7.7	7.7	03.19	40 26.386	.4350	+16 40 52.80	.506	1	1	
			04.07	26.322		52.53		1	1	
915	6.5	6.5	04.08	42 34.975	.5934	+23 23 18.14	.676	2	2	
916	7.4	7.4	03.99	43 17.747	.6266	+24 44 18.67	.733	2	2	
917	8.1	8.1	04.02	44 52.195	.4419	+17 7 55.07	.856	2	2	
918	7.3	7.3	04.09	44 52.877	.3957	+15 5 39.40	.858	2	2	
919	8.2	8.2	03.16	44 54.384	.6406	+25 21 47.46	.860	2	2	
920	6.5		03.19	46 7.859	.4977	+19 34 52.22	.955	1	1	
			04.04	7.879		52.05		1	1	
921	6.8	6.9	04.08	47 4.725	.5688	+22 35 30.87	−9.030	2	2	
922	4.9		04.03	47 22.742	.6806	+27 1 28.42	.053	1	1	*Fund.*
923	7.0	7.1	04.05	48 16.191	.4203	+16 17 46.02	.122	3	3	
924	7.2	7.0	04.09	48 20.084	.5378	+21 21 56.01	.127	2	2	
925	7.0	7.2	03.16	49 2.938	.4666	+18 21 42.58	.183	2	2	
926	5.3	5.5	03.19	49 49.834	.5074	+20 8 53.11	.244	1	1	
			04.07	49.772		52.93		1	1	
927	7.5	7.5	03.99	49 59.853	.6233	+24 55 45.10	.257	2	2	
928	6.7	6.7	04.08	50 7.544	.5972	+23 53 16.57	.266	2	2	
929	8.2	8.0	04.02	50 42.470	.6591	+26 22 13.77	.312	2	2	
930	5.9	5.8	04.09	51 18.786	.4125	+16 3 26.64	.359	2	2	
931	6.3	6.4	03.16	52 49.251	.4276	+16 47 16.27	.474	2	2	
932	8.3	8.3	03.19	53 1.631	.5342	+21 25 ...	.490	1	–	
			04.07	1.587		24.79		1	1	
933*	5.9		02.24	54 52.863	.6356	+25 39 59.47	.633	2	2	*Fund.*
			04.09	52.930		59.91		2	2	
934	7.2	7.1	04.08	54 55.374	.4649	+18 31 10.05	.636	2	2	
935	7.0	6.8	04.02	54 58.533	.5009	+20 5 25.28	.640	2	2	
936*	6.5	6.6	03.99	55 2.566	.5905	+23 51 28.86	.645	2	2	S. f. dup. 3″
937	6.0		02.26	55 3.499	.4436	+17 34 57.97	.646	2	2	*Fund.*
938	6.4	6.6	03.16	55 48.354	.4239	+16 43 51.46	.704	2	2	
939	6.8	6.8	03.19	57 4.172	.3897	+15 13 38.77	.801	1	1	
			04.07	4.143		39.42		1	1	
940	6.3	6.5	04.08	57 56.322	.5507	+22 21 4.34	.866	2	2	
941	7.0	7.2	04.01	58 36.343	.5249	+21 17 22.44	.917	2	2	
942	7.0	7.0	04.02	58 58.537	.4747	+19 7 29.55	.946	2	2	
943	8.0	8.0	04.09	59 37.758	.4466	+17 54 19.85	.995	2	2	
944	6.2	6.2	02.24	8 0 22.928	.5613	+22 55 16.30	−10.052	2	2	
945	8.1	7.8	02.26	1 37.932	.4943	+20 6 23.69	.147	2	2	
946*	8.3	8.0	03.16	1 52.577	.5926	+24 18 27.39	.166	2	2	
947	5.3	5.3	03.19	1 52.817	.5347	+21 52 19.89	.166	1	1	(Fund.)
			04.07	52.835		19.69		1	1	
948*	8.7	8.7	04.08	2 5.932	.6092	+25 0 15.70	.182	2	2	
949*	8.1	8.2	04.09	2 18.038	.6296	+25 50 33.89	.197	2	2	
950	8.1	7.8	03.99	2 21.518	.4799	+19 30 28.68	.201	2	2	
951	8.5	8.5	02.24	2 26.249	.4175	+16 42 18.80	.207	2	2	
952	6.5		02.26	3 7.198	.3571	+13 55 56.27	.259	2	2	
953*	5.8	5.8	03.16	4 25.879	.6258	+25 48 38.32	.357	2	2	Pr. Mo. −^{s}.007 −0″.35

No.	Mag.		Epoch.	R. A. 1900.0	Precess.	Decl. 1900.0	Precess.	Obs.		Notes.
				h m s	s	° ′ ″	″			
954	6.3	6.0	1903.19	8 5 21.903	3.3766	+14 55 30.69	−10.427	1	1	
			04.07	21.860		30.59		1	1	
955	7.2	7.5	04.08	5 56.249	.4102	+16 30 50.48	.469	2	2	
956	5.0		02.26	6 28.666	.4410	+17 56 57.88	.510	2	2	*Fund.* N. p. dup.
			03.99	28.685		57.17		2	2	
957*	6.5	6.5	02.24	7 46.244	.5640	+23 26 18.83	.606	2	2	
958	8.5	8.5	03.16	7 57.040	.5437	+22 34 51.49	.620	2	2	
959	7 0	7.0	03.19	8 37.058	.5069	+21 0 36.62	.669	1	1	
			04.07	36.999		36 40		1	1	
960*	8.4	8.6	04.08	8 44.238	.6006	+25 2 16.19	.678	2	2	
961	7.2	7.2	04.09	8 47.540	.3407	+13 21 3.87	.682	2	2	
962	7.6	7.6	02.24	10 13.141	.4602	+18 59 58.91	.787	2	2	
963	6.5	6.5	02.26	12 35.718	.3930	+15 59 17.76	.963	2	2	
964	8.5	8.9	03.16	14 14.820	.4726	+19 46 0.84	−11.083	2	2	
965	5.9	5.8	03.19	14 31.144	.5009	+21 3 47 40	.102	1	1	
			04.07	31.154		47.51		1	1	
966*	5.7	5.7	04.08	14 35.495	.5756	+24 20 14.60	.106	2	2	
967*	7 5	7 5	04.09	14 41.227	.6065	+25 39 5.20	.114	2	2	
968	7.5	7.5	02.24	15 36.274	.5256	+22 13 35.86	.181	2	2	
969*	8.2	8.4	02.26	15 56.959	.5488	+23 16 12.20	.207	2	2	
970	8.2	8.5	03.16	16 11.602	.4304	+17 55 8.73	.225	2	2	
971	7.3	7.0	03.19	16 19.391	.3471	+13 56 31.96	.233	1	1	
			04.07	19.320		32.18		1	1	
972	7.2	7.2	04.08	16 20.757	.3707	+15 5 9.55	.234	2	2	
973	6.8	6.8	04.09	16 52.636	.3993	+16 28 53.97	.274	2	2	
974	5.9		02.24	17 38.339	.4446	+18 39 12.13	.329	2	2	*Fund.*
975	7.4	7.5	02.26	19 1.563	.4823	+20 28 34.81	.428	2	2	N. f. wide pair.
976	6.2	6.2	03.16	20 10.315	.4147	+17 22 32.67	.510	2	2	Pr. Mo. −^{s}.014 −0″.15
977*	6.0	7.0	03.19	20 43.062	.5785	+24 51 46.62	.550	1	1	S. p. dup. 5″ Blue and red.
			04.07	42.995		46.91		1	1	
978	5.6	5.5	04.08	21 12.158	.3238	+12 59 4.80	.584	2	2	Pr. Mo. (?)
979	8.5	8.3	04.09	21 19.587	.4602	+19 34 55.99	.593	2	2	
980*	7.8	8.0	02.24	21 31.890	.5456	+23 28 50.09	.608	2	2	
981	8.7	8.7	02.26	22 13.970	.3916	+16 21 48.32	.658	2	2	
982	6.8	6.8	03.16	22 17.817	.5001	+21 28 54.17	.663	2	2	
983	5.9	6.0	03.19	22 41.162	.5666	+24 28 36.56	.690	1	1	
			04.07	41.138		37.10		1	1	
984	5.9	6.0	04.08	23 2.586	.3536	+14 32 30.71	.716	2	2	
985	8.8	8.5	04.09	24 5 787	.5170	+22 21 46.36	.791	2	2	
986	5.8	5.8	02.26	25 35.809	.5607	+24 25 6.81	.896	2	2	
987	5.8	5.8	02.24	25 53.690	.4305	+18 25 56.75	.917	2	2	
988	5.5		03.16	26 55.640	.4788	+20 46 51.50	.990	2	2	*Fund.*
989	8.0	8.0	03.19	27 0.765	.3810	+16 4 42.43	.996	1	1	
			04 07	0.641		42.06		1	1	
990	6.4	6.1	04.08	27 5.542	.5584	+24 25 30.34	−12.001	2	2	
991	8.2	8.2	04.09	28 11.172	.3585	+15 0 53.01	.077	2	2	
992	6.8	6.6	02.24	28 12.779	.3304	+13 35 57.86	.080	2	2	
993	6.5		02.26	30 31.323	.3690	+15 39 34.74	.240	2	2	
994	7.7	8.0	03.16	30 49.738	.5107	+22 31 11.51	.262	2	2	
995	8.8	8.8	03.19	30 57.620	.4324	+18 48 56.94	.271	1	1	
			04.07	57.670		56 74		1	1	
996	8.0	7.8	04.08	32 37.125	.4665	+20 33 25.10	.384	2	2	
997	8.1	8.1	04.09	32 49.390	.4016	+17 24 34.42	.399	2	2	
998	6.5	6.5	02.24	32 52.565	.5407	+24 2 24.25	.403	2	2	Pr. Mo. −^{s}.003 −0″.17
999	7.0	7.0	02.26	34 36.462	.4461	+19 42 8.31	.521	2	2	
1000	8.0	8.0	03.16	35 2 465	.3464	+14 43 58.16	.550	2	2	
1001	8.0	7.8	03.19	37 16.364	.3847	+16 48 29.15	.702	1	1	
			04.07	16.282		29.40		1	1	
1002	4.8		04.08	37 30.039	.4861	+21 49 41.51	.717	4	4	*Fund.*
1003	5.6	5.6	02.24	37 41.796	.3114	+13 2 22.75	.731	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1004	4.3	1903.19	8 39 0.225	3.4166	+18 31 18.61	−12.819	1	1	*Fund.*
		04.07	0.214		17.70		1	1	
1005	8.0 7.8	02.26	40 5.305	.4526	+20 23 14.87	.892	2	2	
1006	7.8 7.9	03.16	40 38.864	.3351	+14 25 36.33	.929	2	2	
1007	7.4 7.7	04.08	40 39.984	.5000	+22 43 1.68	.930	2	2	
1008	8.8 8.8	02.24	40 43.400	.3729	+16 24 3.73	.934	2	2	
1009	5.8 6.0	04.09	41 27.183	.2977	+12 28 36.93	.983	2	2	
1010	7.7 7.5	02.26	42 27.285	.3973	+17 45 47.55	−13.049	2	2	
1011	6.5 6.6	03.16	45 3.682	.4222	+19 12 18.57	.222	2	2	
1012	6.7 6.5	03.19	45 27.362	.3547	+15 43 17.56	.247	1	1	Pr. Mo. −ˢ.010 +0″.08
		04.07	27.388		17.77		1	1	
1013	8.8 8.8	02.26	45 36.876	.4662	+21 27 15.94	.258	2	2	
1014	8.3 8.0	02.24	46 53.902	.3139	+13 36 40.78	.342	2	2	Pr. Mo. (?)
1015	7.2 7.0	03.19	48 12.238	.4403	+20 20 43.28	4.27	1	1	
		04.07	12.199		43.21		1	1	
1016	6.8 6.9	03.16	48 14.159	.3236	+14 12 30.46	.429	2	2	
1017	7.5 7.7	02.26	48 31.857	.4848	+22 35 45.32	.449	2	2	Pr. Mo. −ˢ.007 −0″.21
1018	6.5 6.5	04.08	49 44.934	.3855	+17 36 42.95	.527	2	2	Red
1019	5.7 5.6	04.09	50 27.969	.2815	+12 0 29.91	.573	2	2	
1020	5.2 5.2	03.19	51 40.379	.3476	+15 42 22.30	.651	1	1	
		04.07	40.326		22.84		1	1	
1021	5.6 6.0	02.24	52 0.159	.3520	+15 57 55.17	.672	2	2	
1022	8.5 8.4	02.27	52 14.037	.4214	+19 40 8.34	.687	1	1	
		04.17	14.013		8.13		1	1	
1023	6.8 6.8	04.08	52 38.880	.4022	+18 41 41.04	.713	2	2	
1024	4.3	03.23	53 1.129	.2836	+12 14 41.49	.737	4	4	*Fund.*
		04.28	1.118		41.85		4	4	
1025	7.5 7.5	04.09	53 11.341	.4565	+21 33 15.49	.747	2	2	
1026	7.5 6.9	02.24	53 57.066	.3044	+13 27 45.61	.796	2	2	
1027	7.5 7.5	02.26	56 6.966	.3748	+17 28 24.05	.933	2	2	
1028	8.7 8.5	03.16	56 30.340	.3292	+14 59 29.12	.957	2	2	
1029	7.6 7.9	02.24	57 0.240	.4574	+21 54 45.20	.988	2	2	
1030	7.3 7.3	03.19	57 37.394	.4777	+23 0 22.83	−14.028	1	1	
		04.07	37.426		21.83		1	1	
1031	8.8 8.6	04.08	58 43.580	.3935	+18 40 31.45	.097	2	2	
1032	8.8 8.5	04.09	59 1.874	.2847	+12 36 56.38	.115	2	2	
1033	8.0 8.0	02.26	59 48.599	.4135	+19 50 5.26	.164	2	2	
1034	7.5 7.6	02.24	9 0 38.559	.3472	+16 15 42.36	.214	2	2	
1035	7.5 7.5	04.09	1 0.952	.4319	+20 54 54.32	.238	2	2	Pr. Mo. −ˢ.001 −0″.20
1036	6.5 7.0	03.31	1 41.088	.4779	+23 22 56.21	.279	2	2	N. f. dup.
1037	5.0	03 17	2 19.929	.2553	+11 4 14.39	.319	3	3	*Fund.*
		04.16	19.907		14.38		5	5	
1038	7.5 7 3	04.30	2 36.603	.3246	+15 6 52.07	.336	3	3	
1039	8.0 7.8	02.26	2 59.053	.3593	+17 6 19.48	.359	2	2	
1040	5.2	02.24	3 36.639	.4566	+22 27 0.03	.397	2	2	*Fund.*
1041	7.0 6.8	04.11	4 20.291	.2689	+11 58 18.20	.441	3	3	Pr. Mo. (?)
1042	6.5 6.5	03.31	4 36.242	.4540	+22 24 9.49	.457	2	2	
1043	8.2 8.2	04.08	5 14.616	.3955	+19 17 44.61	.496	2	2	
1044	8.5 8.3	02.26	5 57.332	.2898	+13 17 57.61	.538	2	2	
1045	8.7 8.5	04.28	6 4.579	.4209	+20 45 46.20	.546	2	2	
1046	6.8 6.8	04.30	6 4.990	.2243	+ 9 23 7.17	.546	2	2	
1047	6.8 6.8	02.24	6 19.994	.3788	+18 27 13.88	.562	2	2	
1048	6.5 6.6	03.31	7 54.665	.4351	+21 41 43.00	.656	2	2	
1049	7.8 7.8	04.09	7 59.793	.2449	+10 43 6.82	.661	2	2	
1050	8.0 8.2	02.26	9 24.606	.3391	+16 25 8.55	.746	2	2	
1051	5.6 5.5	04.08	9 42.689	.3206	+15 21 22.75	.763	2	2	
1052	8.5 8.5	04.28	10 24.210	.4091	+20 29 21.68	.804	2	2	
1053	7.0 7.0	04.30	10 50.348	3860	+19 13 37.96	.830	2	2	Pr. Mo. −ˢ.013 +0″.02
1054	8.7 8.6	04.08	11 53.688	.2871	+13 29 59.87	.892	2	2	
1055	6.5 6.5	04.09	12 0.666	.4610	+23 29 51.40	.899	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
				h m s	s	° ′ ″	″			
1056	8.0	8.3	1902.24	9 12 4.071	3.3478	+17 7 24.60	-14.902	2	2	
1057	7.0	7.0	02.26	12 25.906	.2607	+11 55 12.29	.923	2	2	
1058	7.2	7.2	04.28	12 30.986	.2035	+ 8 21 54.28	.928	2	2	
1059	6.6		03.31	13 24.028	.3632	+18 7 45.43	.979	2	2	*Fund.*
			04.30	24.029		45.72		3	3	
1060	7.2	7.2	02.24	14 7.957	.2318	+10 12 41.48	-15.022	2	2	
1061	6.7	6.7	02.26	15 44.156	.3207	+15 47 44.89	.114	2	2	
1062	7.0	6.9	03.31	15 50.985	.2836	+13 32 17.12	.121	2	2	Pr. Mo. (?)
1063	6.8	6.8	04.09	15 52.097	.3410	+17 1 25.98	.122	2	2	Pr. Mo. -^{s}.002 -0″.04
1064	7.5	7.5	04.08	16 10.578	.3769	+19 10 27.37	.140	2	2	Pr. Mo. - .004 -0 .13
1065	8.2	8.2	04.28	16 17.583	.4246	+21 55 26.09	.147	2	2	
1066	7.4	7.4	02.24	18 8.755	.4016	+20 47 29.24	.252	2	2	
1067	8.8	9.0	04.30	18 16.929	.2486	+11 29 27.92	.260	3	3	
1068	6.8	6.8	02.26	18 55.883	.3626	+18 34 17.86	.297	2	2	
1069	6.3	6.5	03.31	19 7.691	.3902	+20 13 9.46	.308	2	2	Pr. Mo. ^{s}.000 -0″.11
1070	8.4	8.3	04.09	19 39.311	.2372	+10 50 44.86	.337	2	2	S. fol. 30^{s}
1071	7.2	7.0	04.08	21 27.770	.2966	+14 44 14.33	.439	2	2	Pr. Mo. -^{s}.003 -0.″03
1072	5.6		04.28	23 6.189	.2136	+ 9 29 32.38	.530	2	2	
1073	7.2	7.0	02.24	23 8.100	.2646	+12 49 16.43	.531	2	2	
1074	6.0	6.0	02.26	23 9.760	.2005	+ 8 37 29.43	.533	2	2	
1075	8.3	8.1	03.31	23 23.768	.3748	+19 43 25.46	.546	2	2	
1076	7.8	7.9	04.09	23 43.633	.4016	+21 21 4.33	.565	2	2	
1077	7.5	7.5	04.08	23 59.027	.3471	+18 5 19.75	.578	2	2	
1078	7.0	7.0	04.30	24 43.231	.4151	+22 15 5.61	.619	3	3	
1079	7.7	7.9	04.28	25 14.374	.2796	+13 56 8.96	.647	2	2	
1080	7.5	7.4	02.24	26 6.789	.3824	+20 26 54.52	.695	2	2	
1081	7.5	7.5	02.26	26 8.427	.3140	+16 12 37.28	.696	2	2	
1082	5.2		04.24	26 33.359	.2447	+11 44 33.15	.719	4	4	*Fund.*
1083	5.4	5.4	03.31	26 36.004	.2209	+10 9 24.58	.721	2	2	
1084	7.5	7.5	04.08	27 14.719	.1812	+ 7 30 18.69	.756	2	2	
1085	8.2	7.6	02.24	29 22.259	.1963	+ 8 37 56.40	.870	2	2	
1086	6.5	6.5	02.26	29 34.109	.2621	+13 6 1.44	.881	2	2	
1087	7.0	7.0	03.31	30 25.313	.3757	+20 29 30.99	.926	2	2	
1088	8.5	8.5	04.13	30 27.108	.2200	+10 18 56.55	.928	2	2	
1089	8.3	8.3	04.08	30 51.132	.3570	+19 22 32.67	.949	2	2	
1090	5.9	6.0	04.29	31 31.643	.3171	+16 53 10.21	.985	2	2	
1091	5.8	5.8	04.28	31 55.956	.1752	+ 7 17 3.89	-16.006	2	2	
1092	7.9	7.9	02.24	32 32.261	.3299	+17 48 22.74	.038	2	2	
1093	6.8		02.26	32 33.913	.2841	+14 47 56.62	.040	2	2	Pr. Mo. -^{s}.006 -0.″06
1094	6.5		03.31	33 18.096	.3747	+20 44 54.81	.078	2	2	*Fund.*
			04.31	18.128		55.95		1	1	
1095	7.7	7.5	04.29	33 23.607	.2307	+11 13 48.12	.082	2	2	
1096	8.5	8.0	04.09	34 10.372	.2501	+12 37 6.10	.123	2	2	
1097	6.9	6.8	04.12	35 9.464	.2620	+13 30 35.58	.174	2	2	Pr. Mo. ^{s}.000 -0″.15
1098	3.8		02.26	35 48.841	.2159	+10 20 50.10	.209	2	2	*Fund.*
			04.31	48.853		49.83		1	1	
1099	7.5	7.5	04.28	35 54.912	.2031	+ 9 27 2.46	.214	2	2	
1100	8.0	8.0	03.31	36 16.854	.3003	+16 12 35.77	.233	2	2	
1101	8.2	8.5	04.29	36 47.692	.3194	+17 32 15.79	.258	2	2	
1102	6.5	6.5	04.09	37 46.560	.3652	+20 39 1.27	.309	2	2	
1103	5.7		02.24	38 17.228	.2724	+14 28 45.24	.335	2	2	*Fund.*
1104	6.5	6.4	04.08	38 56.389	.3428	+19 19 24.71	.368	2	2	
1105	8.8	8.8	02.26	40 37.397	.2614	+13 54 39.47	.453	2	2	
1106	6.0	6.0	03.31	40 53.594	.1682	+ 7 10 12.78	.466	2	2	
1107	6.1	6.0	04.09	41 0.133	.2380	+12 16 14.83	.471	2	2	
1108	7.0	7.1	04.08	41 58.219	.1927	+ 9 2 1.71	.520	2	2	
1109	Var.	7.0	04.28	42 10.864	.2316	+11 53 33.21	.530	2	2	Red.
1110	7.7	7.7	02.24	42 25.306	.2128	+10 32 17.43	.542	2	2	
1111	7.5	7.5	02.26	43 34.077	.3234	+18 31 22.18	.598	2	2	
1112	8.2	8.2	03.31	43 45.519	.2788	+15 25 21.95	.608	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1113	8.3 8.3	1902.24	9 45 19.952	3.3389	+19 47 26.79	−16.684	2	2	
1114	6.5	04.18	45 37.390	.2503	+13 32 1.68	.698	4	4	*Fund.*
1115	8.5 8.0	04.09	45 44.833	.2952	+16 47 16.20	.705	2	2	
1116	8.8 8.9	02.26	47 51.143	.2018	+10 4 43.31	.806	2	2	Pr. Mo. (?)
1117	8.7 8.7	04.28	47 59.250	.2223	+11 38 30.10	.812	2	2	
1118	6.5 6.4	04.09	48 27.898	.1541	+ 6 25 47.10	.835	2	2	
1119	7.2 7.4	04.08	48 49.036	.1811	+ 8 32 47.84	.851	2	2	
1120	7.8 8.0	02.24	50 26.280	.3052	+18 0 58.57	.927	2	2	
1121	6.0 6.1	04.28	51 7.935	.1904	+ 9 24 25.91	.960	2	2	
1122	7.8 7.5	03 31	51 11.463	.2658	+15 12 8.19	.963	2	2	S. f. Pr. Mo. $-{}^{s}.003$ $-0''.12$
1123	8.0 8.0	04.09	51 51.340	.3271	+19 45 54.40	.994	2	2	
1124	7.1 7.2	04.08	52 5.682	.2878	+16 56 5.94	−17.005	2	2	
1125	8.5 8.5	04.28	52 28.564	.2494	+14 4 59.18	.023	2	2	
1126	6.4 6.3	04.29	52 49.819	.1812	+ 8 47 29.66	.039	2	2	
1127	5.3	02.26	52 50.663	.2339	+12 55 18.76	.040	6	6	*Fund.*
1128	7.2 7.2	03.31	53 25.541	.2077	+10 56 7.30	.066	2	2	
1129	5.0	03.32	54 55.780	.1763	+ 8 31 26.74	.135	3	4	*Fund.*
		04.09	55.782		27.10		2	2	
1130	8.0 7.9	02.26	54 58.867	.1542	+ 6 43 46.33	.138	2	2	
1131	8.0 8.0	04.08	55 13.070	.2978	+18 2 45.25	.148	2	2	Pr. Mo. $-{}^{s}.002$ $+0''.09$
1132	8.1 8.2	04.28	55 42.912	.1869	+ 9 25 53.62	.170	2	2	
1133	8.2 8.4	02.29	55 44.475	.1385	+ 5 28 33.53	.171	2	2	
1134	8.3 8.1	02.24	55 57.917	.2492	+14 24 28.79	.182	2	2	
1135	7.2 7.5	02.26	58 14.200	.1964	+10 22 57.24	.283	2	2	
1136	7.7 7.7	03.31	58 23.887	.3110	+19 26 10.19	.291	2	2	Pr. Mo. $-{}^{s}.016$ $0''.00$
1137	7.5 7.5	02.29	58 47.126	.2171	+12 6 44.09	.308	2	2	
1138	8.1 7.8	04.08	59 34.323	.1367	+ 5 29 20.37	.342	2	2	
1139	7.5 7.5	02.24	59 47.425	.1721	+ 8 28 32.80	.352	2	2	
1140	6.9 6.9	04.29	10 0 15.392	.2666	+16 14 37.55	.373	2	2	Pr. Mo. (?)
1141	7.3 7 4	03.32	1 14.917	.2284	+13 16 9.86	.415	2	2	
1142	8.1 8.0	03.33	1 19.575	.1182	+ 3 57 48.71	.419	2	2	4′ N. f. 39^{s}
1143	6.9 6.8	04.28	1 33.704	.1429	+ 6 5 57.02	.429	2	2	
1144	8.8 8.6	03.31	1 38.514	.2448	+14 38 44.52	.432	2	2	
1145	3.6	04.09	1 52.892	.2769	+17 15 1.45	.443	2	2	*Fund.*
1146	7.5 7.5	04.29	2 14.636	.2563	+15 38 53.28	.458	2	2	Pr. Mo. $-{}^{s}.007$ $-0''.08$
1147	4.6 4.7	03.32	2 35.899	.1936	+10 29 16.04	.474	2	2	
1148	1.4	02.26	3 2.813	.2165	+12 27 21.69	.493	6	6	*Fund.*
		04.08	2.700		21.96		1	2	
1149	7.1 7.0	03.33	4 0.552	.1480	+ 6 39 39.86	.534	2	2	
1150	8.2 8.2	04.28	4 39.425	.2903	+18 41 5.61	.561	2	2	Pr. Mo. $-{}^{s}.001$ $-0''.26$
1151	8.5 8.5	04.29	5 32.789	.2435	+14 58 30.13	.599	2	2	
1152	8.5 8.5	03 31	5 38.681	.1644	+ 8 11 13.71	.602	2	2	
1153	7.0 7.0	02.24	6 15.601	.2292	+13 50 55.94	.629	2	2	
1154	8.6 8.8	02.26	6 21.067	.2762	+17 46 7.04	.632	2	2	
1155	6.0	03.32	7 36.126	.1286	+ 5 6 32.70	.684	2	2	*Fund.*
		04.08	36.143		32.42		4	4	
1156	7.5 7.5	02.29	8 3.002	.1114	+ 3 34 4.93	.702	2	2	
1157	8.0 8.0	03.33	8 12.436	.1792	+ 9 40 51.87	.709	2	2	
1158	8.2 8.2	04.28	8 31.053	.1976	+11 20 13.20	.721	2	2	
1159	7.2 7.2	04.29	9 6.461	.2581	+16 38 4.08	.746	2	2	
1160	8.2 8.0	02.24	9 29.897	.1402	+ 6 14 46.35	.761	2	2	
1161	7.9 7.8	03.31	9 49.840	.2056	+12 10 15.20	.775	2	2	
1162	8.8 8.8	02.29	10 27.961	.1524	+ 7 25 23.77	.801	2	2	
1163	5.9	02.26	11 18.728	.2271	+14 13 37.21	.835	2	2	
1164	8.8 8.8	03.32	11 39.494	.1659	+ 8 44 40.17	.848	2	2	
1165	7.5 7.5	02.24	13 2.327	.2125	+13 7 20.41	.903	2	2	Pr. Mo. $-{}^{s}.016$ $-0''.07$
1166	7.2 7.2	03.33	13 31.472	.2693	+18 12 25.74	.922	2	2	
1167	8.0 7.8	02.29	14 10.094	.1818	+10 25 18.16	.947	2	2	
1168	8.7 8.6	02.26	15 3.869	.1574	+ 8 11 29.78	.982	2	2	
1169	8.1 8.0	04.28	15 7.341	.1963	+11 51 19.04	.985	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
1170	8.5 8.3	1904.29	10 15 19.772	3.1148	+ 4 7 32.17	− 17.992	2 2	
1171	7.9 7.8	03.31	15 30.480	.1254	+ 5 9 1.95	.999	2 2	Pr. Mo. (?)
1172	6.5 6.5	03.32	15 52.236	.1009	+ 2 47 34.33	− 18.013	2 2	Pr. Mo. $-^{s}.001$ $+0''.01$
1173	6.2 6.5	02.24	16 27.711	.2339	+15 28 47.01	.036	2 2	(Fund.)
1174	8.0 8.1	03.33	16 35.117	.1878	+11 12 15.12	.040	2 2	
1175	7.0 7.0	04.28	16 57.857	.1692	+ 9 28 7.70	.054	2 2	
1176	7.8 8.0	02.29	17 10.201	.2523	+17 14 46.77	.062	2 2	
1177	6.5 6.5	04.29	17 46.568	.1436	+ 7 3 1.20	.086	2 2	
1178	8.7 8.6	02.26	18 4.096	.2201	+14 24 39.85	.096	2 2	
1179	8.0 8.0	02.24	19 38.887	.2056	+13 14 13.73	.155	2 2	
1180	6.2 6.0	03.31	19 59.068	.1648	+ 9 17 35.44	.168	2 2	
1181	8.6 8.0	02.29	20 8.992	.1285	+ 5 41 3.56	.173	2 2	
1182	7.0 7.0	03.32	20 57.921	.1158	+ 4 26 26.97	.205	2 2	
h	7.8 7.8	02.26	21 24.731	.2127	+14 8 8.53	.221	2 2	
1183	7.2 7.2	03.33	21 54.085	.1884	+11 49 33.20	.238	2 2	
1184	8.5 8.3	04.28	22 11.593	.1474	+ 7 43 33.76	.249	2 2	
1185	5.9 6.1	04.29	22 22.136	.1724	+10 16 19.28	.255	2 2	
1186	7.7 7.7	02.24	23 3.883	.2220	+15 15 51.59	.280	2 2	
1187	7.0 7.0	02.29	23 4.605	.2324	+16 15 57.84	.281	2 2	Pr. Mo. (?)
1188	7.2 7.2	03.31	23 19.707	.2463	+17 38 38.28	.290	2 2	
1189	7.7 7.5	03.32	23 48.579	.1024	+ 3 9 33.47	.307	2 2	
1190	8.5 8.5	03.33	24 35.851	.1537	+ 8 33 23.05	.335	2 2	
1191	7.5 7.5	04.28	25 13.660	.1437	+ 7 34 18.39	.357	2 2	
1192	8.1 8.2	04.29	25 48.647	.1271	+ 5 51 15.81	.378	2 2	
1193	8.5 8.3	03.31	26 14.960	.1822	+11 40 54.44	.392	2 2	
1194	5.7	02.24	26 51.515	.2103	+14 39 1.96	.414	2 2	
1195	8.0 7.6	02.26	26 58.173	.1984	+13 26 0.15	.417	2 2	Pr. Mo. (?)
1196	4.0	03.33	27 32.769	.1632	+ 9 49 16.37	.438	2 2	*Fund.*
σ	9.0 9.0	02.29	28 11.932	.2191	+15 43 45.56	.460	2 2	N. f.
1197	8.5 8.5	03.32	29 7 382	.1141	+ 4 37 40.26	.491	2 2	
1198	5.2	04.28	29 35.002	.1397	+ 7 28 7.35	.507	2 2	
1199	5.7	04.29	29 47.407	.1550	+ 9 10 1.50	.514	2 2	N. p. dup.
1200	7.0 6.8	03.31	29 56.835	.0966	+ 2 43 16.79	.519	2 2	
1201	8.7 8.9	02.26	31 25.092	.1752	+11 32 32.15	.568	2 2	Pr. Mo. (?)
1202	7.3 7.5	02.24	31 43.135	.1918	+13 23 7.29	.578	2 2	
1203	8.5 8.3	02.29	31 56.866	.1597	+ 9 53 38.46	.585	2 2	N. f. 16^{s}.7
1204	7.7 7.7	03.32	33 15.188	.1280	+ 6 26 1.15	.628	2 2	
1205	6.5	03.32	33 32.824	.2195	+16 38 52.63	.637	4 4	*Fund.*
		04.28	32.788		52.72		4 4	
1206	8.0 8.0	02.26	33 49.976	.2062	+15 15 10.17	.647	2 2	
1207	8.4 8.5	02.29	35 9.481	.1152	+ 5 3 41 51	.689	2 2	
1208	8.0 8.0	02.24	35 19.952	.1802	+12 35 59.99	.694	2 2	
1209	8.2 8.1	03.33	36 9.128	.1488	+ 9 5 6.46	.720	2 2	
1210	8.8 9.0	04.28	36 25.391	.1356	+ 7 33 28.80	.729	2 2	
s	8.5 8.3	02.26	36 46.853	.1906	+13 59 40.08	.740	2 2	
1211	7.2 7.2	04.29	37 1.005	.1633	+10 52 43.75	.747	2 2	
1212	7.5 7.5	03.31	37 13.851	.0838	+ 1 23 6.59	.754	2 2	
1213	7.7 7.3	03.32	37 27.689	.1061	+ 4 6 20.50	.761	2 2	*Fund.*
1214	6.1 6.5	02.29	38 9.478	.1153	+ 5 16 21.10	.782	2 2	N. f. dup.
1215	6.5 6.5	03.31	40 0.320	.0964	+ 3 0 50.66	.838	2 2	
1216	6.2	04.28	40 53.323	.1271	+ 6 54 0.99	.864	2 2	*Fund.*
1217	8.8 8.9	02.29	41 1.449	.1523	+10 2 40.72	.869	2 2	
1218	6.5 6.5	02.24	41 1.913	.1788	+13 16 29.58	.869	2 2	
1219	5.7	02.26	41 7.521	.1908	+14 43 20.51	.871	2 2	Pr. Mo. $-^{s}.010$ $-0''.07$
1220	8.2 8.5	03.31	41 20.826	.1656	+11 42 50.77	.878	2 2	Pr. Mo. (?)
1221	8.0 8.0	03.32	41 23.618	.1131	+ 5 10 34.55	.879	2 2	Pr. Mo. $-^{s}.016$ $-0''.17$
1222	8.2 8.2	04.29	43 30.498	.1397	+ 8 44 55.76	.940	2 2	
1223	8.7 8.7	04.28	43 40.394	.0871	+ 1 55 52.84	.946	2 2	
1224	5.3	02.26	44 0.086	.1575	+11 4 27.58	.955	6 6	*Fund.*
1225	7.3 7.5	04.29	45 46.986	.1030	+ 4 7 13.69	− 19.005	2 2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1226	6.8 6.8	1903.31	10 45 53.170	3.1635	+12 6 34.56	−19.008	2	2	
1227	8.3 8.3	03.32	45 59.303	.1266	+ 7 17 36.95	.011	2	2	
1228	8.2 8.2	03.33	46 4.954	.1446	+ 9 40 48.57	.013	2	2	
1229	8.0 8.2	04.29	46 57.822	.1311	+ 7 59 33.91	.037	2	3	7″ S. f. 0^{s}.6
1230	6.9 6.8	02.24	47 5.462	.0837	+ 1 33 21.71	.041	2	2	
1231	7.3 7.5	02.26	47 25.375	.1127	+ 5 32 5.36	.050	2	2	Pr. Mo. −^{s}.020 −0″.04
1232	6.5 6.0	02.29	47 28.767	.0747	+ 0 19 48.70	.052	2	2	
1233	8.3 8.3	04.29	48 42.579	.0951	+ 3 11 26.60	.085	2	2	
1234	7.5 7.5	03.31	49 1.630	.1656	+12 54 13.38	.093	2	2	
1235	6.0 6.0	02.24	50 33.746	.0812	+ 1 16 12.83	.134	2	2	
1236	8.8 9.0	02.26	50 36.037	.1473	+10 39 22.97	.135	2	2	Pr. Mo. (?)
1237	6.5 6.5	02.29	50 49.955	.1191	+ 6 43 8.65	.141	2	2	
1238	8.2 8.2	03.32	51 28.328	.1711	+14 5 32.61	.157	2	2	
1239	8.2 8.2	03.33	51 33.926	.0680	− 0 38 3.52	.160	2	2	
1240	7.5 7.5	04.28	52 1.316	.0739	+ 0 13 24.01	.172	2	2	
1241	8.0 8.0	02.24	53 39.383	.0874	+ 2 15 57.25	.212	2	2	
1242	7.5 7.3	02.26	54 19.548	.1421	+10 28 0.80	.230	2	2	
1243	8.3 8.3	02.29	54 20.468	.1238	+ 7 45 41.48	.230	2	2	Pr. Mo. −^{s}.010 −0″.23
1244	8.5 8.3	04.29	54 24.528	10.46	+ 4 53 23.80	.232	2	2	
1245	6 5 6.5	03.32	54 27.630	.1541	+12 14 26.41	.233	2	2	Pr. Mo. (?)
1246	5.0	02.35	55 23.883	.0993	+ 4 9 16.21	.256	1	1	*Fund.*
		03.32	23.839		16.35		4	4	
1247	5.1 5.0	04.28	55 33.826	.1155	+ 6 38 19.82	.260	2	2	
1248	8.8 9.0	04.29	57 15.375	.0811	+ 1 23 7.16	.300	2	2	
1249	7.5 7.5	03.31	57 20.144	.1341	+ 9 42 39.45	.302	2	2	
1250	6.2 6.0	02.24	58 29.569	.0757	+ 0 32 15.67	.329	2	2	
1251	8.2 8.0	03.32	59 8.728	.1077	+ 5 45 49.36	.344	2	2	
1252	8.0 7.8	03.33	59 12.441	.0678	− 0 44 20.50	.346	2	2	
1253	6.5 6.7	04.28	59 18.305	.1544	+13 12 21.97	.348	2	2	
1254	4.7	02.26	59 51.515	.1203	+ 7 52 35.93	.361	6	6	*Fund.*
		03.35	51.483		36.10		4	4	
1255	8.7 8.7	02.35	11 0 26.551	.1493	+12 37 44.84	.374	1	1	
		03.31	26.519		45.04		2	2	
1256	5.7 5.5	03.32	1 48.157	.0870	+ 2 29 54.07	.404	2	2	Pr. Mo. −^{s}.028 −0″.07
1257	7.3 7.3	04.29	1 59.948	.1359	+10 45 11.40	.408	2	2	
1258	8.4 8.0	02.29	2 53.723	.1279	+ 9 33 53.73	.428	2	2	
1259	8.7 8.5	02.24	3 2.572	.1134	+ 7 6 55.38	.431	2	2	
1260	7.7 7.9	03.33	3 4.449	.0958	+ 4 4 28.94	.432	2	2	
1261	7.5 7.4	03.36	3 10.502	.0645	− 1 21 41.47	.434	2	2	
1262	8.1 8.2	02.35	3 28.477	.0722	− 0 1 16.59	.440	1	1	
		03.31	28.487		16.54		2	2	
1263	8.5 8.5	02.26	3 36.010	.1039	+ 5 32 1.45	.442	2	2	S. p. 11^{s}
1264	8.7 9.1	03.35	3 52.397	.0844	+ 2 8 17.95	.449	2	2	N. f. 4^{s}
1265	7.5 7.7	04.28	4 7.337	.0679	− 0 47 28.49	.454	2	2	
1266	7.0 7.0	03.32	5 23.467	.1385	+11 50 39.72	.481	2	2	
1267	8.5 8.3	02.24	7 30.581	.1281	+10 24 33.33	.523	2	2	
1268	5.5	03.33	8 38.415	.0748	+ 0 28 28.96	.546	2	2	*Fund.*
		04.28	38.441		28.59		2	2	
1269	7.2 7.0	02.29	8 45.060	.0869	+ 2 48 50.76	.548	2	2	
1270	5.9 5.8	03.32	8 50.143	.1171	+ 8 36 28.87	.549	2	2	
θ Leon.	3.4	02.25	8 59.584	.1568	+15 58 34.12	.552	4	4	*Fund.*
1271	8.0 8.1	03.35	9 9.222	.0972	+ 4 50 29.10	.555	2	2	
1272	8.3 8.0	04.29	9 12.427	.0797	+ 1 25 53.05	.556	2	2	
1273	8.0 7.6	02.35	9 22.503	.1059	+ 6 32 15.05	.560	1	1	2′ N. f. 13^{s}.8
		03.31	22.453		15.16		2	2	
1274	7.5 7.5	03.36	9 30.642	.0686	− 0 43 31.18	.562	2	2	
1275	6.7 6.7	02.29	10 44.396	.1402	+13 23 30.04	.585	2	2	
1276	5.4 5.4	02.26	12 8.689	.0847	+ 2 33 37.66	.612	2	2	Pr. Mo. +^{s}.001 −0″.15
1277	7.0 7.2	03.33	13 8.089	.1326	+12 31 55.63	.628	2	2	
1278	6.5 6.5	03.35	13 47.044	.0826	+ 2 11 55.62	.641	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1279	8.5 8.3	1902.29	11 13 55.211	3.1208	+10 17 52.46	-19.643	2	2	
1280	7.0 7.5	02.35	14 17.344	.0672	- 1 6 13.77	.649	1	1	Pr. Mo. -^{s}.016 -0″.16
		03.31	17.430		13.55		2	2	N. f. dup 12″
1281	8.5 8.3	03.32	14 25.163	.0741	+ 0 21 46 75	.652	2	2	Pr. Mo. (?)
1282	8.0 8.2	03.36	14 35 532	.0915	+ 4 10 7.88	.654	2	2	
1283	8.0 7.8	02.26	15 47.965	.0856	+ 2 58 16.31	.675	2	2	
1284	8.2 8.0	04.28	15 49.812	.0967	+ 5 25 44.30	.676	2	2	
1285	4.1	03.35	15 58.820	.1018	+ 6 34 38.78	.678	2	2	*Fund.*
		04.29	58.799		38.53		2	2	
1286	8.2 8.0	03.33	16 29.728	.1067	+ 7 46 16.94	.687	2	2	
1287	7.4 7.3	02.35	16 39.566	.1153	+ 9 43 1.35	.690	1	1	
		03.31	39.594		0.98		2	2	
1288	7.5 7.5	02.29	18 5.168	.1028	+ 7 8 5.84	.713	2	2	
1289	6.2 6.0	03.32	18 10.733	.0752	+ 0 40 51.24	.714	2	2	
1290	8.3 8.3	04.28	18 28.326	.0608	- 2 44 18.96	.719	2	2	
1291	3.9	03.36	18 42.718	.1192	+11 4 47.98	.722	2	2	*Fund.* dup. 2″
1292	5.5 5.5	02.26	18 54.420	.0805	+ 1 57 24.29	.725	2	2	
1293	8.8 8.8	03.35	19 11.694	.0682	- 0 58 32.50	.730	2	2	Pr. Mo. (?)
1294	5.8 5.8	03.33	19 47.786	.1218	+11 58 47.56	.739	2	2	Pr. Mo. (?)
1295	8.1 7.8	02.35	20 1.901	.0979	+ 6 17 21.02	.743	1	1	
		03.31	1.851		21.29		2	2	
1296	7.0 7.0	04.30	20 41.690	.0899	+ 4 24 38.52	.753	3	2	Pr. Mo. (?)
1297	7.0 7.0	02.29	21 7.429	.1089	+ 9 12 35.99	.759	2	2	N. f.
1298	6.1 7.0	03.32	21 41.511	.0862	+ 3 33 30.31	.768	2	2	N. p. dup. 30″. Pr. Mo. -^{s}.049 +0″.17
1299	7.7 7.7	03.35	22 26.217	.0781	+ 1 30 32.92	.778	2	2	
1300	7.1 7.0	03.33	22 47.106	.0680	- 1 8 58.25	.783	2	2	
1301	5.0	04.28	22 47.698	.0852	+ 3 24 25.72	.783	2	2	*Fund.*
1302	8.3 7.9	02.35	23 49.552	.1116	+10 35 15.89	.798	1	1	Pr. Mo. (?)
		03.31	49.523		15.78		2	2	
1303	7.8 7.8	02.29	24 8.421	.0581	- 3 53 54.05	.802	2	2	
1304	8.0 8.0	03.36	24 12.599	.0731	+ 0 12 30.58	.803	2	2	
1305	8.0 7.8	04.29	24 27.534	.0880	+ 4 19 50.69	.807	2	2	
1306	7.5 7.5	03.32	24 30.106	.1018	+ 8 9 3.75	.808	2	2	
1307	5.1	04.28	25 12.355	.0637	- 2 27 6.82	.816	2	2	
1308	7.7 7.8	02.35	26 53.364	.0682	- 1 13 51.07	.838	1	1	
		03.31	53.407		50.50		2	2	
1309	8.5 8.0	03.36	27 47.798	.1051	+ 9 56 4.85	.849	2	2	S. f. 30^s.7 Pr. Mo. (?)
1310	8.3 8.3	03.32	27 58.180	.0984	+ 7 57 48.26	.852	2	2	
1312	8.5 8.5	03.35	28 15.988	.0767	+ 1 21 21.34	.855	2	2	
1311	8.8 8.8	03.33	28 16.296	.0875	+ 4 41 11.82	.855	2	2	
1313	7.2 7.1	02.29	28 28.066	.0821	+ 3 3 7.02	.857	2	2	
1314	6.7 6.7	04.28	28 59.043	.1092	+11 34 36.64	.864	2	2	
1315	5.7 5.7	04.29	29 14.844	.0836	+ 3 36 55.67	.867	2	2	Pr. Mo. -^{s}.012 -0″.11
1316	6.5 6.7	02.35	29 53.006	.0607	- 3 48 25.75	.874	1	1	
		03.31	53.020		26.20		2	2	
1317	8.7 8.6	02.29	30 24.202	.0937	+ 7 4 33.52	.880	2	2	
1318	7.4 7.3	03.32	31 25.863	.0917	+ 6 39 46.76	.891	2	2	
1319	4.5	03.33	31 49.737	.0716	- 0 16 17.79	.896	2	2	*Fund.*
		04.29	49.757		17.59		2	2	
1320	8.5 8.4	03.35	32 0.970	.0880	+ 5 30 59.82	.898	2	2	
1321	6.7 7.5	03.36	33 17.530	.0672	- 1 52 57.19	.911	2	2	S. f. dup. 5″
1322	5.5 5.5	04.28	33 18.209	.0961	+ 8 41 16.30	.911	2	2	
1323	8.7 8.5	02.29	33 23.829	.0915	+ 7 3 15.09	.912	2	2	
1324	8.5 8.7	03.31	35 10.947	.0654	- 2 45 52.83	.929	2	2	
1325	7.3 7.3	03.32	35 16.504	.0761	+ 1 30 23.30	.930	2	2	
1326	7.9 7.8	03.33	35 20.673	.0866	+ 5 41 39.45	.931	2	2	
1327	8.5 8.3	03.35	35 21.666	.0829	+ 4 12 38.51	.931	2	2	
1328	8.0 8.0	03.36	35 45.387	.0609	- 4 38 37.43	.935	2	2	
1329	7.5 7.5	02.29	37 18.040	.0791	+ 2 55 4.07	.949	2	2	
1330	7.7 8.0	02.35	38 12.725	.0740	+ 0 44 27.20	.956	1	1	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1330		03.31	11 38 12.666		+ 0 44 26.87		2	2	
1331	6.5 6.5	03.32	38 48 688	3.0591	− 6 7 16.09	−19.961	2	2	
1332	8.5 8.3	03.36	39 28.912	.0706	− 0 49 47.32	.967	2	2	
1333	7.8 8.0	04.29	39 59.585	.0753	+ 1 27 53.49	.970	2	2	
1334	4.9	04.28	40 7.819	.0903	+ 8 48 50.19	.972	2	2	
1335	4.2	03.35	40 43.175	.0863	+ 7 5 23.05	.976	2	2	*Fund.*
1336	7.3 7.5	02.29	41 13.145	.0677	− 2 26 48.87	.980	2	2	
1337	8.0 8.2	02.35	41 15.020	.0632	− 4 47 36.70	.980	1	1	
		03.31	15.051		37.06		2	2	
1338	7.2 7.5	03.33	41 33.800	.0664	− 3 11 9.10	.982	2	2	
1339	8.2 8.0	04.29	41 39.032	.0799	+ 4 1 49.15	.983	2	2	
1340	5.2 5.7	03.32	42 46.660	.0879	+ 8 48 5.16	.990	2	2	
1341	6.5 6.6	03.35	43 55.292	.0727	+ 0 14 13.60	.997	2	2	Pr. Mo. −^{s}.014 −0″.04
1342	7.2 7.2	03.36	43 59.525	.0817	+ 5 44 36.29	.998	2	2	Pr. Mo. − .003 −0.20
1343	6.8 6.8	04.28	44 4.541	.0613	− 6 48 17.57	.998	2	2	
1344	8.0 8.0	03.33	45 19.506	.0696	− 1 51 43.09	−20.006	2	2	
1345	3.7	02.33	45 29.282	.0758	+ 2 19 41.28	.007	4	4	*Fund.*
		03.31	29.389		40.93		4	4	
1346	5.7 5.7	04.29	45 55.540	.0655	− 4 46 37.98	.009	2	2	
1347	8.2 8.0	03.36	46 25 963	.0826	+ 7 25 57.54	.012	2	2	
1348	8.7 8.7	03.35	47 51.988	.0653	− 5 40 52.70	.019	2	2	
1349	6.8 6.9	02 29	48 43.168	.0736	+ 1 6 30.79	.023	2	2	
1350	7.0 7.0	02.37	48 45.147	.0686	− 3 13 9.02	.023	2	2	
1351	8.3 8.3	03.32	48 55.069	.0718	− 0 28 58.79	.024	2	2	
1352	8.0 7.9	03.33	48 56.836	.0785	+ 5 26 6.50	.024	2	2	
1353	8.7 8.5	03.36	49 47.459	.0705	− 1 49 4.76	.027	2	2	
1354	8.2 8.2	04.28	49 59.907	.0762	+ 3 46 31.13	.028	2	2	
1355	8.7 8.7	04.29	50 20.885	.0786	+ 6 22 34.78	.029	2	2	
1356	7.6 7.8	02.29	51 40.773	.0774	+ 5 54 7.75	.034	2	2	
1357	6.8 6.8	02.37	51 54.242	.0688	− 4 13 34.77	.034	2	2	Pr. Mo. −^{s}.011 0″.00
1358	7.8 7.9	03.33	53 54.076	.0685	− 6 5 51.70	.040	2	2	
1359	7.3 7.3	03.35	54 7.328	.0707	− 2 45 55.56	.040	2	2	
1360	7.5 7.5	04.28	54 16.739	.0737	+ 2 23 4.31	.041	2	2	
1361	5.2	02.35	54 49.599	.0746	+ 4 12 44.21	.042	6	6	*Fund.*
		03.32	49.587		44.16		2	2	
1362	4.4	03.37	55 44.882	.0755	+ 7 10 18.72	.043	4	4	*Fund.*
1363	6.8 6.8	03.33	55 54.550	.0718	− 1 12 34.07	.044	2	2	
1364	8.8 8.5	03.35	56 19.187	.0710	− 3 38 29.48	.044	2	2	
Anon.	8.5	04.29	56 49.926	.0725	+ 0 38 19.23	.045	1	1	S. p.
1365	8.3 8.2	04.28	56 49.995	.0726	+ 0 39 34.52	.045	2	2	N. f.
1366	6.3 6.4	02.29	57 44.504	.0707	− 7 7 37.58	.046	2	2	
1367	7.2 6.8	02.37	58 38.154	.0732	+ 6 7 0.88	.046	2	2	
1368	7.7 8.0	03.32	59 6.368	.0725	+ 2 1 10.63	.047	2	2	
1369	7.5 7.5	03.33	59 35.913	.0725	+ 4 7 50.30	.047	2	2	
1370	8.4 8.3	03.35	12 0 8.496	.0724	− 0 57 13.48	.047	2	2	Pr. Mo. −^{s}.034 0″.00
1371	6.7 6.7	02.40	0 27.754	.0726	− 5 17 21.27	.047	2	2	
1372	6.4 6.4	02.29	0 52.557	.0726	− 2 34 27.39	.047	2	2	
1373	7.5 7.0	02.37	2 53.314	.0720	+ 1 10 43.16	.045	2	2	
1374	7.2 7.5	03.32	3 4.978	.0735	− 3 43 49.43	.045	2	2	
1375	8.6 8.6	02.40	3 27.639	.0746	− 6 17 50.31	.044	2	2	
1376	6.1	03.37	4 33.852	.0712	+ 2 27 33.52	.043	7	7	*Fund.*
		04.28	33.909		33.13		4	4	
1377	8.8 8.8	02.29	4 41.457	.0726	− 0 26 52.11	.043	2	2	
1378	5.7 5.9	03.33	4 57.600	.0691	+ 6 21 47.16	.042	2	2	Pr. Mo. −^{s}.012 +0″.05
1379	6.4 6.6	03.36	5 19.330	.0763	− 7 13 5.20	.041	2	2	
1380	6.8	02.37	6 14.399	.0737	− 2 8 26.42	.039	2	2	
1381	7.3 7.0	02.40	6 33.340	.0692	+ 4 36 43.65	.039	2	2	
1382	7.8 7.6	03.38	7 6.456	.0751	− 3 50 43.09	.037	2	2	
1383	8.7 8.7	03.33	7 58.213	07.17	+ 0 47 46.04	.035	2	2	
1384	7.0 7.0	02.29	8 49.357	.0698	+ 2 49 1.57	.032	2	2	

No.	Mag.		Epoch.	R. A. 1900.0			Precess.	Decl. 1900.0			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
1385	6.9		1903.31	12	9	8.026	3.0771	− 5	9	48.98	− 20.031	1	2	*Fund.*
			04.28			8.055				49.18		2	2	
1386	7.5	7.5	02.37		9	52.819	.0731	− 0	46	13.54	.028	2	2	
Anon.		7.8	03.40		9	59.453	.0792	− 6	41	58.59	.028	2	2	N. p. dup.
1387	7.4	7.7	03.36		9	59.970	.0792	− 6	41	59.82	.028	2	2	S. f.
1388	8.0	8.1	03.35		10	7.997	.0671	+ 5	4	50.72	.027	2	2	
1389	8.3	8.0	02.40		11	13.398	.0803	− 6	58	34.02	.023	2	2	
1390	8.0	8.0	03.33		11	36.484	.0749	− 2	11	0.50	.021	2	2	
1391	7.8	7.6	03.38		11	51.266	.0712	+ 0	54	28.92	.020	2	2	
1392	8.0	7.8	03.35		12	50.657	.0695	+ 2	7	51.84	.015	2	2	
Anon.		7.2	03.40		13	1.322	.0768	− 3	23	56.68	.014	2	2	S. p. dup.
1393	6.8	7.0	03.36		13	1.716	.0768	− 3	23	37.98	.014	2	2	N. f.
Anon.		7.3	03.37		13	23.593	.0838	− 8	20	48.89	.012	1	1	N. p. 47^{s}.7
1394	6.3	6.3	03.32		13	32.699	.0727	− 0	13	52.60	.012	2	2	
1395	7.0	7.0	03.40		14	11.349	.0845	− 8	21	31.86	.008	3	3	S. f.
1396*	4.1		02.35		14	47.382	.0725	− 0	6	40.01	.005	6	6	*Fund.*
1397	8.7	9.0	03.32		15	15.756	.0817	− 6	0	6.54	.002	2	2	
1398	5.2		03.35		15	16.204	.0663	+ 3	52	10.17	.002	4	4	*Fund.*
1399	8.3	8.3	02.29		16	30.675	.0716	+ 0	23	50.65	− 19.995	2	2	
1400	9.0	9.0	02.37		17	13.640	.0762	− 2	13	16.32	.990	2	2	
1401	6.8	7.0	02.40		18	0.908	.0847	− 6	44	40.56	.985	2	2	
1402	6.5	6.6	03.33		18	6.884	.0805	− 4	25	9.34	.984	2	2	
1403	8.5	8.5	03.32		18	23.066	.0700	+ 1	16	17.93	.982	2	2	Pr. Mo. +^{s}.001 −0″.19
1404	7.8	7.8	02.29		19	33.896	.0685	+ 1	56	15.82	.974	2	2	
1405*	8.8	8.8	03.35		20	10.778	.0734	− 0	30	57.37	.969	2	2	
1406	7.7	7.6	03.36		20	54.303	.0668	+ 2	35	44.99	.963	2	2	
1407	8.8	9.0	03.38		21	19.550	.0843	− 5	29	12.40	.960	2	2	
1408*	7.7		02.37		21	38.836	.0715	+ 0	22	13.50	.958	2	2	
1409	8.0	8.2	02.40		21	51.823	.0790	− 2	58	42.99	.956	2	2	
1410	5.7		03.39		22	43.656	.0817	− 4	3	42.82	.948	4	4	*Fund.*
1411	6.3	6.7	02.29		22	47.524	.0913	− 8	7	24.90	.948	2	2	
1412	7.3	7.1	03.33		23	12.625	.0606	+ 4	57	1.44	.944	2	2	
1413*	7.7	7.5	03.35		24	1.896	.0769	− 1	52	34.64	.937	2	2	
1414*	8.7	8.7	02.37		24	15.356	.0740	− 0	40	47.57	.935	2	2	
1415	7.5	7.5	03.36		24	53.700	.0862	− 5	28	7.47	.929	2	2	
1416	8.5	8.5	03.32		24	56.459	.0887	− 6	26	16.87	.928	2	2	
1417	7.5	7.7	02.40		25	28.403	.0618	+ 4	3	40.42	.923	2	2	S. p. dup.
1418	7.9	8.0	02.29		26	7.999	.0673	+ 1	52	47.50	.917	2	2	
1419	8.6	8.5	03.33		26	10.950	.0647	+ 2	51	17.91	.916	2	2	
1420	6.3	6.5	03.32		26	30.194	.0845	− 4	30	3.72	.913	2	2	
1421*	8.0		02.37		27	52.118	.0716	+ 0	16	36.87	.899	2	2	Pr. Mo. (?)
1422	5.7	6.0	03.38		28	36.963	.0984	− 8	54	1.19	.891	2	2	
1423	8.0	8.2	03.35		29	4.746	.0817	− 3	10	4.89	.886	2	2	
1424*	7.2		02.29		29	15.720	.0749	− 0	51	23.32	.884	2	2	
1425	8.0	8.0	03.38		30	35.425	.0938	− 6	53	46.77	.869	3	3	
1426	8.8		02.37		30	43.528	.0687	+ 1	9	34.87	.867	2	2	
1427	5.9		03.37		31	38.260	.0893	− 5	16	50.75	.856	4	4	*Fund.*
1428*	7.5	7.4	02.40		31	57.787	.0781	− 1	46	3.20	.852	2	2	Pr. Mo. +^{s}.004 −0″.17
1429	6.3	6.3	02.29		32	58.588	.0595	+ 3	49	58 56	.840	2	2	
1430	8.0	8.0	03.31		33	8.700	.1193	− 10	58	1.88	.837	2	2	N. f. 1^{s}.4
1431	6.1	6.0	03.38		33	16.337	.0642	+ 2	24	18.81	.836	2	2	
1432	6.9	6.8	03.33		33	34.806	.0854	− 3	49	24.80	.832	2	2	
l	8.0	7.8	02.37		33	49.323	.0734	− 0	18	15.79	.829	2	2	
1433	4.7	5.0	03.35		34	5.045	.0982	− 7	26	42.72	.826	2	2	
1434	8.8	8.8	03.36		34	17.518	.0715	+ 0	15	12.40	.823	2	2	
1435	6.5	6.5	02.40		34	21.150	.0917	− 5	33	2.86	.822	2	2	
1436	7.8	7.8	03.32		34	45.519	.0812	− 2	30	59.99	.817	2	2	
1437	8.5	8.5	03.35		35	58.562	.1065	− 9	16	25.36	.800	2	2	
1438	8.0	8.0	02.29		36	56.746	.0684	+ 1	2	39.21	.787	2	2	
n	8.8		02.37		37	49.305	.0789	− 1	42	15.38	.775	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
1439	7.5 7.5	1903.33	12 37 51.911	3.0858	− 3 29 47.29	− 19.774	2 2	Pr. Mo. −^{s}.016 −0″.16
1440	6.8 6.8	02.29	39 3.250	.0814	− 2 17 40.57	.757	2 2	
1441	8.2 8.2	03.32	39 52.385	.1150	−10 27 8.69	.744	2 2	
1442	8.8 8.6	03.35	40 27.078	.0660	+ 1 32 2.30	.735	2 2	
1443	7.8	02.37	41 8.995	.0598	+ 3 0 41.16	.725	2 2	
1444	7.8 7.8	03.33	41 48.756	.1032	− 7 15 7.88	.714	2 2	
1445	7.3 7.5	02.40	41 55.056	.1094	− 8 40 3.51	.713	2 2	
1446	6.1 6.5	03.36	42 23.293	.0971	− 5 45 16.39	.705	2 2	
1447	8.0 7.8	03.38	42 24.990	.0901	− 4 8 4.08	.704	2 2	
1448	7.5 7.7	03.35	42 30.385	.1249	−12 1 56.82	.703	2 2	
1449	6.7	03.32	42 45.892	.0545	+ 4 7 7.39	.699	2 2	*Fund.*
1450	8.2 8.2	02.29	42 59.631	.0715	+ 0 11 12.45	.695	2 2	
1451	8.7 9.0	03.36	44 1.483	.0864	− 3 9 14.39	.678	2 2	
1452	8.0 8.2	02.40	44 55.861	.0668	+ 1 12 40.99	.663	2 2	
1453	7.0 7.0	03.33	44 55.882	.1047	− 7 5 15.98	.663	2 2	Pr. Mo. −^{s}.015 0″.00
1454	8.9	02.37	45 16.028	.0782	− 1 16 49.33	.657	2 2	
1455	6.5 6.5	02.29	46 10.706	.1185	− 9 47 37.88	.641	2 2	
1456	7.2	03.32	46 31.510	.0554	+ 3 36 1.29	.635	2 2	
1457	8.2 8.1	03.35	47 2.461	.0988	− 5 32 43.32	.626	2 2	
1458	8.2 8.0	03.38	47 4.530	.0742	− 0 23 6.12	.626	2 2	
1459	6.2 6.5	03.33	48 3.864	.0870	− 3 0 35.55	.607	2 2	Pr. Mo. −^{s}.018 0″.00
1460	8.8 8.6	03.36	48 40.287	.0609	+ 2 19 39.83	.596	2 2	
1461	6.0 6.4	03.38	49 6.234	.1281	−11 6 21.25	.588	2 2	
1462	5.0	02.42	49 9.075	.1174	− 8 59 45.08	.588	4 4	*Fund.*
		03.35	9.066		44.96		2 2	
1463	7.3 7.0	03.32	50 31.500	.0693	+ 0 35 50.40	.561	2 2	
δ Virg.	3.7	02.34	50 33.896	.0522	+ 3 56 27.43	.561	6 6	*Fund.*
1464	7.2 7.7	03.33	51 5.573	.0947	− 4 19 21.08	.551	2 2	N. p. dup.
1465	8.5 8.5	03.36	51 44.879	.1269	−10 20 28.11	.538	2 2	
1466	6.8 7.0	03.38	52 6.763	.1167	− 8 22 11.21	.531	2 2	
1467	7.5 8.0	02.40	52 21.796	.1382	−12 16 12.69	.526	2 2	
1468	8.8 9.0	03.35	52 26.825	.0841	− 2 13 9.65	.524	2 2	
1469	7.0 7.2	03.32	53 25.040	.1070	− 6 24 29.90	.505	2 2	
1470	7.3 7.3	02.29	53 49.730	.1026	− 5 33 1.68	.496	2 2	
1471	5.9 5.9	02.37	54 30.426	.0903	− 3 16 21.07	.483	2 2	
1472	8.2 8.0	03.33	54 59.769	.0759	− 0 38 49.44	.472	2 2	
1473	7.5 7.6	03.38	55 17.272	.1204	− 8 33 36.67	.466	2 2	
1474	8.3 8.4	03.35	56 9.950	.1331	−10 37 2.64	.448	2 2	
1475	8.0 7.8	03.32	56 24.194	.0606	+ 2 3 32.07	.442	2 2	
1476	7.3 7.5	03.36	56 58.959	.1397	−11 34 17.61	.430	2 2	
1477	8.8 8.5	03.33	58 8.458	.0866	− 2 25 36.01	.405	2 2	
1478	7.5 7.5	03.36	58 40.543	.0997	− 4 37 7.65	.393	2 2	Pr. Mo. −^{s}.013 −0″.22
48 Virg.	6.5	02.35	58 45.234	.0908	− 3 7 30.86	.392	6 6	*Fund.*
1479	8.5 8.5	03.35	59 1.467	.1089	− 6 7 30.57	.386	2 2	
1480	7.7 7.5	03.32	59 38.110	.0673	+ 0 50 4.14	.372	2 2	
1481	8.5 8.5	02.40	13 0 19.344	.1479	−12 15 9.66	.356	2 2	
1482	8.9 8.8	02.43	0 27.943	.1335	− 9 57 56.32	.353	2 2	
1483	6.8 6.9	02.42	0 35.584	.1567	−13 34 31.97	.350	2 2	
1484	8.3 8.4	02.41	0 38.268	.1160	− 7 7 24.04	.349	2 2	
1485	8.3 8.3	02.37	1 4.215	.0955	− 3 46 23.46	.339	2 2	
1486	8.7 8.5	02.29	1 45.643	.0808	− 1 22 11.77	.323	2 2	
1487	5.2 5.7	02.42	2 39.393	.1373	−10 12 21.16	.302	2 2	
1488	7.3 7.3	03.33	3 13.072	.1446	−11 13 35.96	.289	2 2	
1489	5.9 5.8	03.38	3 19.510	.1265	− 8 26 55.55	.286	2 2	
1490	6.5 6.0	02.41	4 31.127	.1364	− 9 47 45.32	.258	2 2	
1492	8.3 8.4	03.36	4 33.717	.0909	− 2 51 15.93	.256	2 2	
1491	7.2 7.5	03.35	4 34.227	.1188	− 7 7 18.39	.256	2 2	
1493	4.4	02.37	4 46.278	.1050	− 5 0 18.21	.252	8 8	*Fund.* S. f. dup.
		03.34	46.304		18.61		6 6	
1494	8.5 8.3	03.40	5 35.725	.0717	+ 0 6 50.03	.231	2 2	

No.	Mag.	Epoch.	R. A. 1900.0	Precess.	Decl. 1900.0	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
1495	7.0 7.0	1902.42	13 6 5.276	3.1631	−13 25 45.82	−19.219	2 2	
1496	8.5 8.5	02.43	6 46.058	.1530	−11 52 15.29	.202	2 2	
1497	8.8 8.9	03.40	7 10.882	.1127	− 5 58 6.77	.192	2 2	
1498	7.3 7 1	02.41	7 37.549	.0807	− 1 13 37.65	.180	2 2	
1499	8.5 8.5	03.35	8 30.122	.0988	− 3 50 44.41	.158	2 2	
1500	8.7 9.0	03.36	9 29.500	.1357	− 9 1 34.57	.132	2 2	
1501	7.5 7.5	03.38	9 41.668	.1489	−10 49 54.26	.127	2 2	Pr. Mo. −^{s}.017 −0″.33
1502	8.6 8.6	02.40	10 48.290	.0906	− 2 34 51.79	.098	2 2	
1503	7.5 7.5	02.41	10 52.317	.1089	− 5 8 20.92	.096	2 2	
1504	7.4 7.8	02.42	11 37.456	.1185	− 6 24 24.21	.076	2 2	
1505	7.0 7.2	02.43	11 41.678	.1645	−12 37 50.72	.074	2 2	
1507	7.0 7.1	03.38	12 12.832	.1455	−10 1 9.41	.060	2 2	
1506	6.7 6.5	02.40	12 12.933	.1835	−15 1 8.18	.060	2 2	
1508	6.7	03.36	12 22.657	.0734	− 0 8 54.84	.055	4 4	*Fund.*
1510	6.7 6.9	03.40	12 30.218	.1323	− 8 12 16.81	.052	2 2	
1511	8.7 8.7	02.41	13 50.770	.0778	− 0 44 30.91	.015	2 2	
1509	7.7 7.6	02.42	14 28.052	.1564	−11 8 48.72	−18.997	2 2	
1512	8.8 8.6	02.43	15 21.916	.1250	− 6 57 29.09	.973	2 2	
1513	8.9 9.0	03.35	15 32.512	.0951	− 3 0 31.28	.968	2 2	
1514	7.3 7.4	03.36	15 57.994	.1449	− 9 28 33.79	.956	2 2	
1515	6.5 6.6	02.40	16 47.560	.1810	−13 53 41.51	.932	2 2	
1516	6.7	02.41	16 50.969	.1663	−12 3 20.54	.930	2 2	*Fund.*
		03.39	50.987		21.04		4 4	
1517	7.2 7.1	02.42	17 19.282	.1163	− 5 40 29.59	.917	2 2	Pr. Mo. −^{s}.004 −0″.18
1518	6.1 6.1	02.43	18 7.929	.1067	− 4 24 4.95	.893	2 2	
1519	8.3 8.3	03.35	19 5.892	.0848	− 1 35 6.88	.865	2 2	Fol. 1^{s}.8
1520	7.0 7.0	03.36	19 15.949	.1023	− 3 47 0.87	.860	2 2	
1521	5.8 5.3	03.38	19 20.926	.1092	− 4 38 29.43	.857	2 2	S. f. 36^{s} Pr. Mo. (?)
1522	1.2	02.40	19 55.443	.1581	−10 38 20.79	.840	2 2	*Fund.*
1523	7.2 7.7	02.41	20 0.366	.1387	− 8 15 53.30	.838	2 2	
1524	8.2 8.5	02.42	20 7.518	.1290	− 7 3 43.72	.834	2 2	S. p. dup.
1525	7.0 6.9	02.43	21 4.040	.0778	− 0 40 20.55	.806	2 2	
1526	5.5 5.5	03.40	21 26.056	.1728	−12 11 14.68	.795	2 2	Pr. Mo. −^{s}.012 −0″.02
1527	4.9 5.0	03.35	22 7.034	.2019	−15 27 18.05	.774	2 2	Pr. Mo. − .011 +0 .03
1528	8.0 8.0	03.36	23 13.066	.1494	− 9 13 33.25	.740	2 2	
1529	8.7 8.9	03.38	24 38.945	.1880	−13 29 5.60	.695	2 2	
1530	8.7 8.7	02.40	25 9.627	.1335	− 7 11 11.12	.679	2 2	
1531	6.1 6.1	02.41	25 12.617	.1230	− 5 57 14.94	.677	2 2	Pr. Mo. + .001 +0″.02
1532	8.8 8.8	02.42	25 34.324	.1059	− 3 56 25.43	.665	2 2	
1533	7.3 7.3	02.43	25 41.664	.0940	− 2 32 5.46	.661	2 2	
1534	4.9 5.2	03.35	26 45.856	.1220	− 5 44 23.30	.627	2 2	
1535	8.8 8.8	03.36	26 47.762	.1661	−10 44 21.17	.626	2 2	
1536	7.8 7.5	03.40	27 6.430	.1791	−12 8 54.33	.616	2 2	S. p. 2^{s}.9
1537	5.7 5.4	03.38	27 30.988	.2044	−14 50 55.60	.603	2 2	
1538	5.5 5.5	02.40	27 41.967	.1572	− 9 38 59.32	.597	2 2	
1539	7.0 7.0	02.41	27 58.158	.1419	− 7 55 50.07	.588	2 2	
1540	5.7 5.9	02.42	29 21.368	.1868	−12 42 5.33	.542	2 2	
1541	5.8	02.43	30 19.110	.1162	− 4 53 12.09	.510	2 2	*Fund.*
		03.37	19.103		12.35		6 6	
1542	7.0 8.0	02.40	32 20.802	.1400	− 7 21 43.06	.441	2 2	S. p. dup.
1543	8.1 8.2	02.41	32 25.376	.1288	− 6 8 33.73	.439	2 2	
1544	6.8 6.5	02.42	32 36.764	.0972	− 2 43 33.02	.432	2 2	
1545	7.8 7.8	02.43	32 40.240	.2043	−14 4 58.84	.430	2 2	
1546	8.7 8.7	03.38	33 4.155	.1520	− 8 34 57.41	.417	2 2	
1547	8.5 8.4	03.35	33 12.348	.1712	−10 35 39.32	.412	2 2	
1548	7.3 7.5	03.36	33 58.266	.2121	−14 42 1.14	.385	2 2	
1549	7.3 7.4	03.40	33 58.971	.1815	−11 34 57.21	.385	2 2	
1550	7.8 7.8	02.40	34 17.637	.1629	− 9 36 21.77	.374	2 2	
1551	6.5 6.5	02.41	34 35.189	.2254	−15 56 20.01	.364	2 2	
1552	8.5 8.5	02.43	35 50.184	.1279	− 5 50 51.10	.320	2 2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1553	5 3	1902.42	13 36 21.747	3.1509	− 8 11 53.57	− 18.301	2	2	*Fund.*
		03.35	21.728		54.45		2	2	
1554	8.8 8.5	03.36	37 7.218	.1998	− 13 3 19.46	.274	2	2	
1555	7.0 7.0	03.38	38 19.232	.1090	− 3 46 12.31	.230	2	2	
1556	6.4 6.4	02.41	38 41.948	.1211	− 4 59 42.47	.216	2	2	
1557	8.0 8.0	02.43	38 56.703	.1802	− 10 56 1.04	.208	2	2	
1558	5.8 5.8	03.40	39 5.944	.2295	− 15 40 33.43	.202	2	2	
1559	6.8 6.8	02.42	39 22.890	.2094	− 13 43 4.66	.191	2	2	Pr. Mo. $-^{s}.001$ $-0''.16$
1560	6.8 6.8	03.35	39 42.305	.1428	− 7 7 56.05	.180	2	2	
1561	6.0 6.0	03.36	40 36.530	.1923	− 11 55 31.56	.146	2	2	
1562	6.3 6.3	02.40	41 56.230	.1656	− 9 12 30.31	.096	2	2	
1563	5.7 5.6	02.41	41 58.930	.2522	− 17 21 33.78	.095	2	2	
1564	8.5 8.6	02.43	42 5.539	.1533	− 8 0 6.03	.091	2	2	
1565	7.8 7.8	02.42	42 34.488	.2334	− 15 33 56.50	.072	2	2	
1566	7.0 7.0	03.35	43 4.029	.1369	− 6 20 17.85	.054	2	2	
1567	8.6 8.7	03.38	43 25.828	.2448	− 16 28 54.34	.040	2	2	
1568	8.3 8.5	03.40	43 31.014	.2202	− 14 13 35.72	.036	2	2	
1569	5.2	03.36	44 26.202	.2593	− 17 38 10.02	.001	2	2	*Fund.*
1570	7.5 7.5	02.40	45 29.764	.1863	− 10 51 45.68	− 17.960	2	2	
1571	7.0 6.9	02.41	45 35.407	.1483	− 7 17 16.68	.957	2	2	
1572	7.0 7.0	02.42	45 44.292	.2117	− 13 10 58.97	.951	2	2	
1573	8.5 8.5	02.43	47 22.533	.1206	− 4 34 34.82	.887	2	2	
1574	7.3 7.3	03.40	47 35.402	.1810	− 10 11 18.19	.878	3	3	
1575	8.3 8.5	03.36	47 40.145	.1359	− 5 59 43.36	.875	2	2	
1576	7.8 8.0	03.38	47 48.344	.2404	− 15 30 14.41	.870	2	2	
1577	7.3 7.3	03.40	48 1.162	.1047	− 3 2 52.73	.861	2	2	
1578	7.2 7.4	02.40	48 28.211	.2261	− 14 10 15.61	.843	2	2	
1579	7.0 6.8	02.41	48 55.165	.2556	− 16 41 16.49	.825	2	2	
1580	6.4 7.0	02.42	49 43.360	.1541	− 7 34 0.07	.793	2	2	S. p. dup. Pr. Mo. $-^{s}.014$
1581	8.2 8.2	02.43	49 50.426	.2029	− 11 57 27.24	.788	2	2	
1582	7.0 7.2	03.35	50 35.120	.1735	− 9 15 55.67	.758	2	2	
1583	8.4 8.5	03.38	52 25.192	.1883	− 10 26 10.09	.683	2	2	
1584	8.7 8.7	02.40	53 2.901	.2675	− 17 8 18.55	.657	2	2	
1585	6.7	02.42	53 5.080	.2019	− 11 34 4.37	.656	4	4	*Fund.*
		03.40	5.138		4.67		2	2	
1586	8.3 8.7	02.43	53 21.037	.2473	− 15 25 2.21	.644	2	2	
1587	7.3 7.4	03.35	53 34.444	.2805	− 18 8 11.55	.635	2	2	
1588	6.5 6.9	03.36	53 44.822	.1441	− 6 26 11.65	.628	2	2	
1589	6.8 7.0	03.38	54 14.074	.1275	− 4 55 56.50	.608	2	2	Pr. Mo. $+^{s}.003$ $-0''.23$
1590	8.0 7.8	03.40	54 45.082	.2202	− 12 58 54.94	.586	2	2	
1591	6.5 6.5	02.40	54 48.354	.1588	− 7 40 30.20	.584	2	2	
1592	7.8 7.6	02.41	55 4.044	.2383	− 14 27 58.58	.573	2	2	
1593	8.7 8.4	02.42	56 19.675	.1805	− 9 27 24.23	.519	2	2	
1594	7.0 6.8	02.43	57 37.358	.2715	− 16 53 5.73	.464	2	2	
1595	8.0 8.2	03.35	57 44.186	.1417	− 6 1 43.71	.459	2	2	
1596	7.8 7.8	03.36	58 7.045	.1942	− 10 29 9.54	.443	2	2	
1597	7.5 7.6	03.38	58 50.820	.2089	− 11 38 57.04	.411	2	2	
1598	6.5 6.5	02.40	59 1.240	.1292	− 4 54 2.98	.404	2	2	
1599	6.5 6.3	02.41	59 2.101	.2438	− 14 29 27.93	.403	2	2	
1600	6.5 6.4	03.40	59 3.672	.1748	− 8 46 38.45	.402	2	2	
1601	6.8 6.8	02.42	59 46.995	.2618	− 15 51 24.77	.371	2	2	
1602	7.9 7.8	03.36	59 57.134	.1519	− 6 47 49.26	.363	2	2	
1603	6.8	01.42	14 0 59.963	.1719	− 8 24 52.71	.317	2	2	*Fund.*
		02.45	59.981		52.09		2	2	
		03.38	60.018		51.88		6	6	
1604	7.0 6.5	01.43	1 17.187	.2372	− 13 43 38.41	.305	2	2	
1605	5.7	01.44	1 25.386	.1773	− 8 50 11.11	.299	2	2	
1606	8.0 7.8	01.45	1 51.269	.1672	− 7 57 46.12	.279	2	2	
1607	7.0 8.0	02.40	2 40.308	.2229	− 12 26 59.64	.243	2	2	S. f. dup. 5″
1608	6.5 6.8	02.41	3 7.425	.2097	− 11 21 15.40	.223	2	2	

No.	Mag.		Epoch	R. A. 1900.0.			Precess.	Decl. 1900.0.			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
1609	8.7	8.5	1902.42	14	3	21.338	3.2852	-17	15	41.37	-17.213	2	2	
1610	7.3	7.4	02.43		3	28.922	.3054	-18	46	10.38	.207	2	2	
1611	6.5	6.1	02.45		3	40.830	.1917	-9	51	39.19	.198	2	2	
1612	5.3		01.42		5	22.674	.2695	-15	49	47.02	.121	2	2	
1613	6.8		01.43		5	42.919	.1394	-5	30	7.75	.106	2	2	
1614	8.5		01.44		5	47.283	.2557	-14	44	19.88	.103	2	2	
1615	4.3		01.45		7	33.600	.1944	-9	48	29.36	.021	2	2	*Fund.*
			02.41			33.634				29.17		2	2	
			03.38			33.627				29.55		2	2	
1616	7.0	7.0	02.40		7	45.227	.2406	-13	23	25.23	.012	2	2	
1617	7.0	7.0	02.42		8	0.973	.1716	-7	58	33.01	.000	2	2	
1618*	7.2	7.2	02.45		8	20.717	.2151	-11	22	11.14	-16.984	2	2	
1619	8.0	8.0	02.43		9	0.727	.1547	-6	35	17.86	.953	2	2	
1620	5.5	5.6	02.41		9	53.348	.3018	-17	44	3.77	.913	2	2	
1621	7.7		01.42		10	22.303	.2735	-15	36	58.07	.890	2	2	
1622	6.3		01.43		11	6.051	.1504	-6	9	24.46	.855	2	2	
1623	6.0		01.44		11	30.257	.1797	-8	25	11.51	.836	2	2	
1624	6.5		01.45		11	31.973	.3098	-18	7	17.53	.835	2	2	
1625	7.5	7.5	02.40		11	54.346	.3299	-19	29	58.72	.817	2	2	
1626	6.5	6.5	02.42		12	3.899	.1819	-8	33	33.62	.810	2	2	
1627	8.0	8.2	02.45		12	39.091	.2607	-14	26	54.89	.782	2	2	
1628	7.2	7.2	02.43		12	41.169	.1687	-7	30	12.38	.780	2	2	
1629	6.2	6.4	02.41		13	6.355	.3142	-18	15	11.10	.760	2	2	
1630*	7.8		01.42		13	26.292	.2232	-11	36	5.49	.744	2	2	
1631*	4.6		01.43		13	41.868	.2411	-12	54	39.40	.731	2	2	*Fund.*
1632	6.5		01.46		14	37.865	.1539	-6	17	7.99	.686	2	2	
1633	7.7		01.45		14	57.157	.3002	-17	4	7.39	.671	2	2	
1634	7.0	7.1	02.40		16	12.041	.2031	-9	54	46.11	610	2	2	
1635	8.8		01.42		16	28.391	.1806	-8	12	55.58	.597	2	2	
1636	7.0	7.6	03.38		17	21.129	.1690	-7	18	30.26	.553	2	2	N. p. dup. 5″ red.
1636		7.5	02.43			21.145				35.50		2	2	S. f. dup. 5″ blue.
1637*	6.3		01.44		18	2.692	.2231	-11	15	26.30	.519	4	4	*Fund.*
			02.42			2.668				26.45		2	2	
1638*	8.8		01.45		18	24.269	.2687	-14	30	13.90	.501	2	2	
1639	8.0	8.0	02.41		18	24.331	.2404	-12	29	11.93	.501	2	2	3′ N. f. 6^{s}.3
1640	6.7	6.7	02.45		18	28.587	.2850	-15	38	50.39	.498	2	2	
1641*	6.5	6.5	02.40		19	18.290	.2237	-11	12	56.75	.456	2	2	
1642	7.0		01.42		19	54.727	.3439	-19	31	2.24	.426	2	2	S. f. 2^{s}.3
1643	8.5		01.43		21	2.304	.3285	-18	22	9.65	.369	2	2	
1644	8.3	8.0	01.44		21	26.694	.3118	-17	12	6.54	.348	2	2	
1645	7.0		01.45		21	54.690	.2713	-14	23	14.96	.325	2	2	
1646*	6.8	6.8	02.40		22	19.890	.2506	-12	54	35.40	.303	2	2	
1647	8.7	8.7	02.42		22	50.891	.1863	-8	18	31.07	.277	2	2	
1648	6.5		01.42		23	11.278	.2039	-9	33	21.20	.260	2	2	
1649	7.3		01.43		24	45.456	.2809	-14	48	16.90	.180	2	2	
1650	7.0		01.44		25	0.362	.3919	-22	0	57.27	.167	2	2	
1651	7.3		01.45		25	14.321	.3646	-20	16	22.58	.155	2	2	
1652	8.3	8.3	02.40		25	54.809	.2329	-11	25	33.56	.119	2	2	
1653	7.8	7.8	02.43		26	21.085	.2526	-12	44	56.27	.097	2	2	
1654	7.0		01.42		26	26.619	.2997	-15	55	8.57	.091	2	2	
1655	8.0	8.2	02.41		26	48.831	.3233	-17	26	19.86	.072	2	2	
1656	8.2	8.0	02.42		26	49.286	.2199	-10	29	35.63	.072	2	2	
1657	8.2	8.1	02.45		27	13.607	.2037	-9	18	57.74	.050	2	2	
1658	8.0		01.43		28	33.630	.3514	-19	4	46.67	-15.981	2	2	
1659	6.4		01.45		29	12.939	.3671	-20	0	1.87	.946	4	4	*Fund.*
			02.42			12.953				2.18		4	4	
1660	7.5	7.5	02.42		30	27.213	.3976	-21	44	26.73	.880	2	2	
1661	7.0	7.0	02.45		30	28.864	.1890	-8	8	16.65	.878	2	2	
1662	8.5	8.5	02.41		30	51.777	.2700	-13	35	29.40	.858	2	2	
1663	6.0		01.42		31	40.447	.2451	-11	52	48.54	.815	2	2	Pr. Mo. -^{s}.060 +0″.36

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1664	7.0	1901.43	14 33 37.800	3.2205	−10 7 22.35	−15.709	2	2	
1665	7.8	01.44	33 49.234	.3336	−17 27 18.46	.699	2	2	
1666	7.3	01.45	34 36.735	.3080	−15 46 10.99	.655	2	2	N. p. 20^{s}
1667	7.0	02.40	35 3.863	.2750	−13 37 0.27	.631	2	2	
1669	8.2 8.2	02.41	35 24.073	.2952	−14 53 24.40	.612	2	2	
1668	7.3	01.42	35 24.529	.4142	−22 11 20.65	.612	2	2	
1670	7.3 7.1	02.42	35 47.686	.3698	−19 29 55.52	.591	2	2	
1671	8.2	01.43	36 35.121	.2737	−13 25 33.89	.547	2	2	
1672	7.0 7.0	02.43	36 36.669	.2487	−11 48 26.07	.546	2	2	
1673	8.3	01.44	36 54.588	.3928	−20 46 0.60	.529	2	2	
1674	6.3	01.48	38 3.959	.2112	− 9 16 24.64	465	2	2	
1675	8.0 8.0	02.42	40 2.786	.3239	−16 19 16.28	.354	2	2	
1676	7.3	01.43	40 17.796	.3399	−17 16 30.66	.340	2	2	
1677	6.1	01.44	40 22.282	.4329	−22 43 47.94	.336	2	2	
1678	8.4 8.3	02.40	40 26.085	.3614	−18 33 26.83	.332	2	2	S. f. $7^{s}.8$
1679	6.2	01.42	40 26.835	.3037	−15 2 17.08	.331	2	2	*Fund.*
		02.43	26.812		17.23		4	4	
1680	6.4 6.5	02.43	40 30.455	.3987	−20 45 6.87	.329	2	2	Pr. Mo. $-^{s}.006$ $-0''.14$
1681	6.3	01.45	41 32.447	.4031	−20 54 18.94	.270	2	2	
1682	6.0 6.1	02.41	42 27.479	.2639	−12 25 9.18	.218	2	2	
1683	7.7	01.42	43 46.697	.2332	−10 24 38.89	.142	2	2	
1684	7.3	01.43	43 48.473	.3823	−19 29 16.02	.143	2	2	
1685	5.4	01.44	43 50.086	.2864	−13 43 56.17	.139	2	2	Mean. dup.
1686	7.2 7.5	02.40	44 25.142	.2082	− 8 47 13.41	.106	2	2	
1687	5.3	01.45	45 9.221	.3182	−15 34 52.90	.063	2	2	N. p. $11^{s}.4$
1688	3.0	02.43	45 20.659	.3192	−15 37 34.90	.052	4	4	*Fund.*
1689	6.4 6.4	02.41	46 14.553	.3595	−17 56 36.33	.000	2	2	
1690	8.3 8.3	02.45	46 26.637	.3453	−17 5 48.79	−14.988	2	2	
1691	7.7	01.42	47 0.255	.3104	−14 58 36.78	.956	2	2	
1692	7.8	01.43	47 27.695	.2657	−12 13 59.01	.929	2	2	
1693	8.3	01.44	47 31.923	.4521	−23 3 29.42	.925	2	2	
1694	8.3 8.5	02.40	47 35.372	.4184	−21 11 42.76	.922	2	2	
1695	7.3	01.45	48 29.721	.2092	− 8 40 37.51	.868	2	2	
1696	5.9 5.5	02.42	48 31.560	.4759	−24 14 0.35	.866	2	2	
1697	5.9 6.0	02.43	48 57.050	.2550	−11 29 25.57	.842	2	2	
1698	7.3 7.3	02.41	49 25.537	.3931	−19 36 19.68	.815	2	2	
1699	7.8	01.42	50 23.624	.2894	−13 29 42.13	.756	2	2	
1700	7.5	01.43	50 40.668	.3758	−18 31 23.95	.740	2	2	
1701	7.0	01.44	50 45.191	.3389	−16 23 42.80	.736	2	2	
1702	5.8	02.42	51 20.490	.2491	−11 0 22.07	.701	4	4	*Fund.*
1703	6.3	01.45	51 37.564	.4209	−20 57 54.48	.684	2	2	S. f. Pr. Mo. $+^{s}.072$ $-1''.80$
1704	7.0 7 0	02.42	52 19.007	.2669	−12 2 6.39	.642	2	2	
1705	6.8 6.8	02.41	52 29.670	.3510	−16 57 45.46	.631	2	2	
1706	7.5 7.6	02.43	52 56.249	.4422	−21 59 58.71	.605	2	2	
1707	9.0 9.0	02.45	52 57.661	.4695	−23 26 57.68	.604	2	2	
1708	8.1	01.42	53 20.170	.3187	−15 2 7.65	.582	2	2	
1709	6.2	01.43	53 28.987	.2464	−10 44 31.14	.572	2	2	
1710	8.7	01.44	54 20.085	.4031	−19 44 55.98	.521	2	2	
1711	8.4	01.45	54 41.956	.3081	−14 19 48.58	.499	2	2	
1712	7.8 7.8	02.40	54 43.927	.3763	−18 13 44.87	.497	2	2	
1713	9.0 8.5	02.42	55 18.636	.4991	−24 45 7.44	.462	2	2	
1714	8.0	01.42	56 44.863	.4415	−21 37 11.38	.375	2	2	
1715	6.8	01.43	57 29.145	.3623	−17 14 19.48	.330	2	2	
1716	7.3	01.44	57 39.554	.2791	−12 27 52.02	.320	2	2	
1717	7.8	01.45	57 58.365	.3444	−16 11 56.36	.300	2	2	
1718	3.5	02.40	58 12.932	.5073	−24 53 20.91	.285	2	2	(Fund.)
1719	7.8 7.8	02.41	58 35.755	.3252	−15 4 11.67	.262	2	2	N. p. $5^{s}.2$
1720	7.5 7.4	02.42	59 29.447	.4653	−22 37 25.38	.207	2	2	
1721	8.2 8.5	02.41	15 0 6.085	.4170	−20 1 35.87	.169	2	2	
1722	8.7 8.9	02.43	0 30.349	.3062	−13 52 6.05	.143	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.			Precess.	Decl. 1900.0.			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
1723	7.5		1901.42	15	0	33.972	3.3983	-18	59	20.40	-14.140	2	2	
1724	6.5		01.43		0	40.804	.4484	-21	38	34.80	.133	2	2	
1725	5.4		01.44		1	2.832	34.22	-15	52	8.56	.110	2	2	
1726	7.0		01.45		1	5.081	.2832	-12	31	9.72	.108	2	2	
1727	7.3		01.49		1	26.261	.4919	-23	48	28.51	.086	2	2	
1728	7.5		01.51		2	39.663	.2697	-11	39	55.41	.009	3	3	
1729	7.7	7.6	02.41		3	4.800	.4726	-22	40	58.40	-13.983	2	2	
1730	6.2		01.42		4	23.681	.5410	-25	57	5.42	.900	2	2	
1731	7.5	7.6	02.42		4	32.713	.3794	-17	40	32.57	.891	2	2	
1732	7.5		01.44		5	43.945	.2901	-12	40	31.58	.816	2	2	
1733	8.7	8.5	01.45		5	47.951	.4428	-20	55	52.93	.812	2	2	
1734	8.8		01.49		6	14.519	.3297	-14	51	11.08	.784	2	2	
1735	6.5		01.51		6	14.563	.3466	-15	46	51.65	.784	3	3	
1736	4.9		01.43		6	31.132	.4147	-19	24	47.76	.766	2	2	*Fund.*
			02.41			31.204				48.31		2	2	
1737	6.5		01.42		7	37.283	.4135	-19	16	15.93	.696	2	2	
1738	6.5	6.5	02.43		7	37.906	.5260	-24	55	56.79	.695	2	2	
1739	8.5	8.5	02.42		7	56.274	.4905	-23	9	56.85	.676	2	2	
1740	7.0		01.44		8	46.744	.3138	-13	50	7.81	.622	2	2	
1741	6.5		01.45		8	55.055	.3797	-17	23	42.23	.613	2	2	
1742	5.8		01.49		10	35.015	.4720	-22	1	46.13	.506	2	2	
1743	7.0		01.51		11	18.214	.2950	-12	40	13.16	.459	3	3	
1744	8.3		01.42		11	26.667	.3417	-15	12	32.10	.450	2	2	
1745	8.8		01.43		12	1.444	.3728	-16	49	42.50	.412	2	2	
1746	8.0		01.44		12	5.832	.4409	-20	21	14.74	.407	2	2	
1747	7.2		01.45		13	17.265	.5147	-23	54	0.48	.330	2	2	Mean. dup. 2″
1748	7.3		01.49		14	7.861	.4208	-19	11	12.47	.275	2	2	
1749	8.0		01.51		14	38.698	.3008	-12	49	44.04	.241	3	3	
1750	7.0	7.0	02.41		14	45.256	.5538	-25	37	27.93	.234	2	2	Pr. Mo. (?)
1751	6.0		01.43		15	13.422	.3951	-17	47	43.33	.204	2	2	
1752	6.0		01.44		15	25.836	.3455	-15	11	15.77	.189	2	2	
1753	8.5		01.45		16	33.164	.4934	-22	37	4.49	.116	2	2	
1754	6.3		01.49		17	27.036	.3399	-14	46	36.81	.056	2	2	*Fund.*
			02.43			27.036				37.51		4	4	
1755	7.5		01.51		17	53.385	.3676	-16	12	23.86	.027	3	3	
1756	6.0		01.42		18	22.932	.2889	-12	0	45.53	-12.994	2	2	
1757	8.6		01.43		18	24.306	.4526	-20	29	13.98	.993	2	2	
1758	7.7		01.44		18	31.737	.3253	-13	57	14.18	.984	2	2	
1759	7.3	7.0	02.41		18	43.154	.5543	-25	18	43.99	.972	2	2	
1760	8.3	8.3	02.42		18	58.926	.5085	-23	9	15.05	.954	2	2	
1761	7.5	7.5	02.43		19	9.002	.4783	-21	41	20.72	.943	2	2	
1762	7.2		01.45		20	10.579	.4084	-18	9	49.11	.874	2	2	
1763	6.5		01.49		21	5.443	.4394	-19	39	16.25	.813	2	2	
1764	7.3	7.0	02.42		22	7.056	.3411	-14	36	19.16	.743	2	2	
1765	6.2		01.47		22	36.942	.3759	-16	22	3.98	.710	5	4	*Fund.*
			02.42			36.938				4.38		4	4	
1766	6.7		01.43		24	49.384	.4594	-20	23	3.83	.560	2	2	
1767	5.8		01.44		25	1.832	.3765	-16	15	58.14	.545	2	2	
1768	8.5		01.42		26	16.107	.4154	-18	8	43.95	.461	2	2	
1769	7.3		01.45		26	20.738	.4874	-21	37	33.51	.456	2	2	
1770	5.4		01.49		26	51.929	.4403	-19	19	47.28	.420	2	2	*Fund.*
1771	7.2		01.51		27	9.560	.5723	-25	27	40.48	.399	3	2	
1772	6.7	6.9	02.41		27	14.395	.5433	-24	9	4.29	.395	2	2	S. f. dup. 8″
1773	5.4	5.7	02.42		27	16.151	.3838	-16	30	48.84	.393	2	2	
1774	8.0	8.0	02.43		27	22.698	.5212	-23	7	36.87	.386	2	2	
1775	7.2		01.43		27	43.746	.3090	-12	40	30.03	.362	2	2	
1776	4.0		01.45		29	55.876	.3456	-14	27	21.39	.208	4	4	*Fund.*
1777	8.0		01.42		31	17.555	.3613	-15	10	56.92	.114	2	2	
1778	6.6		01.43		31	28.470	.5908	-25	56	56.24	.102	2	2	
1779	6.0	6.0	02.41		31	55.243	.5211	-22	48	36.50	.070	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
				h m s	s	° ′ ″	″			
1780	8.0		1901.49	15 32 25.700	3.5556	−24 19 34.49	−12.034	2	2	
1781	5.8		01.51	32 27.357	.4760	−20 41 9.67	.033	3	2	
1782	7.2		01.44	33 0.195	.4066	−17 20 10.98	−11.994	2	2	
1783	5.7	5.7	02.43	33 9.120	.4407	−18 58 21.20	.984	2	2	
1784	8.2	7.5	02.42	33 9.693	.5084	−22 8 48.43	.983	2	2	
1785	5.2		01.44	34 22.064	.5399	−23 29 35.48	.898	4	4	*Fund.*
1786	8.2		01.42	34 39.038	.5804	−25 16 2.68	.879	2	2	
1787	8.2	8.2	02.41	35 1.035	.3902	−16 25 52.68	.853	2	2	
1788	7.2		01.49	35 41.886	.3346	−13 38 51.40	.804	2	2	
1789	5.0		01.48	36 10.989	.4524	−19 21 16.75	.770	1	2	
1790	8.0		01.50	36 54.315	.4307	−18 17 12.78	.720	2	2	
1791	8.4		01.43	37 30.592	.4850	−20 47 53.74	.676	2	2	
1792	6.7		01.42	37 35.807	.3179	−12 44 6.48	.670	2	2	
1793	6.7	6.7	02.42	37 48.399	.3581	−14 43 21.32	.655	2	2	
1794	7.0		01.45	38 16.795	.3960	−16 33 8.44	.621	2	2	
1795	7.6	7.6	02.41	38 21.168	.5591	−24 4 43.27	.616	2	2	
1796	5.5		02.43	38 26.785	.3715	−15 21 15.79	.609	2	2	*Fund.*
1797	7.4		01.44	39 46.908	.5867	−25 10 54.07	.514	2	2	
1798	6.7		01.49	39 49.832	.5242	−22 26 19.53	.510	2	2	
1799	8.0		01.42	40 44.917	.3838	−15 50 54.20	.445	2	2	
1800	8.3	7.9	01.43	41 16.599	.6270	−26 46 35.17	.406	2	2	
1801	7.6		01.45	41 32.470	.4760	−20 9 20.80	.388	2	2	
1802	7.0		01.42	44 5.539	.5018	−21 11 5.37	.204	2	2	
1803	6.5		01.43	44 8.977	.4239	−17 35 46.95	.199	2	2	
1804	7.3		01.44	44 44.730	.5426	−22 57 10.99	.156	2	2	
1805	4.8		01.45	44 57.795	.6011	−25 26 50.60	.140	2	2	
1806	7.2		01.49	45 52.607	.4480	−18 38 11.47	.074	2	2	
1807	8.0		01.51	46 0.837	.3618	−14 33 43.49	.063	3	3	
1808	6.5	6.5	02.41	46 3.188	.3467	−13 49 54.97	.061	2	2	
1809*	5.0		01.42	47 31.690	.4768	−19 52 5.08	−10.953	2	2	*Fund.*
1810	4.7	5.1	02.42	47 36.391	.5951	−25 1 43.28	.948	2	2	Fol. dup.
1811	5.6		01.44	47 55.428	.5768	−24 14 6.75	.924	2	2	
1812	5.4		01.45	47 58.680	.5639	−23 40 49.08	.919	2	2	
1813	4.3		01.43	48 7.818	.4031	−16 26 8.65	.909	2	2	Pr. Mo. $+^{s}.007$ $+0''.12$
1814	6.9	6.8	02.41	48 24.773	.6452	−27 2 31.02	.888	2	2	
1815	6.8		01.49	48 47.167	.5369	−22 28 11.68	.861	2	2	
1816*	6.3		01.51	49 13.497	.4615	−19 5 15.42	.829	3	3	
1817	5.5	5.5	02.42	49 27.373	.6206	−25 58 17.36	.813	2	2	
1818	8.0		01.43	50 5.833	.4330	−17 44 14.56	.764	2	2	
1819*	7.0		01.42	51 20.839	.5111	−21 11 42.20	.671	2	2	
1820	5.4		01.44	52 34.962	.5907	−24 32 35.56	.580	2	2	
1821	4.8		01.45	52 35.269	.3552	−13 59 27.02	.580	2	2	
1822	8.3		01.49	52 36.403	.3805	−15 11 20.75	.578	2	2	
1823	3.1		01.50	52 48.045	.6221	−25 49 34.22	.564	3	3	*Fund.*
			02.42	48.075		35.14		2	2	
1824*	8.6	8.3	02.41	53 19.315	.4785	−19 39 6.13	.524	2	2	S. f. 1^{s} dup.
1825	7.5		01.43	53 34.161	.5769	−23 54 34.57	.507	2	2	
1826	2.5		01.53	54 25.129	.5411	−22 20 14.22	.443	2	2	*Fund.*
1827	5.6		01.42	54 42.739	.4049	−16 14 20.14	.421	2	2	Pr. Mo. $-^{s}.046$ $-0''.39$
1828	8.8		01.44	55 12.830	.4589	−18 40 48.06	.384	2	2	
1829*	7.5		01.45	55 14.375	.5082	−20 52 22.13	.382	2	2	
1830	8.2	8.4	01.49	56 53.578	.4430	−17 53 33.46	.257	2	2	
1832	5.4		01.53	57 17.923	.6227	−25 35 11.10	.227	2	2	
1831*	7.5		01.51	57 18.302	.4808	−19 33 44.65	.227	3	3	
1833	6.8		01.42	57 54.277	.5958	−24 27 0.45	.182	2	2	
1834	7.7		01.43	58 55.190	.6521	−26 40 24.57	.106	2	2	
1835*	3.0		01.44	59 37.233	.4825	−19 31 54.53	.052	2	2	*Fund.*
			02.42	37.270		54.74		4	4	
1836*	7.5		01.45	59 49.735	.5296	−21 33 56.59	.036	2	2	
1837	6.2		01.54	16 0 8.402	.5718	−23 20 1.66	.013	2	2	

No.	Mag.		Epoch.	R. A. 1900.0			Precess.	Decl. 1900.0			Precess.	Obs.		Notes.	
				h	m	s	s	°	′	″	″				
1838	8.5		1901.53	16	0	27.253	3.3871	-15	11	50.00	-9.989	2	2		
1839*	4.1		01.42		0	57.370	.5038	-20	23	54.04	.951	2	2		
1840	7.3		01.52		1	22.031	.4202	-16	40	23.39	.920	2	2		
1841	6.2		01.51		1	28.720	.3577	-13	48	7.69	.911	3	3		
1842*	4.6		01.49		1	32.353	.5090	-20	35	54.89	.907	2	2	*Fund.*	
1843	5.8		01.43		2	1.804	.6412	-26	3	32.19	.869	2	2		
1844	6.3		01.44		2	45.251	.5771	-23	25	6.09	.814	2	2		
1845	6.9		01.45		4	9.101	.6007	-24	19	6.99	.707	2	2		
1846	6.5		01.42		4	9.677	.4540	-18	4	31.04	.706	2	2		
1847	7.5	7.3	01.43		5	26.068	.6671	-26	53	23.62	.609	2	2		
1848	8.2		01.44		5	56.621	.5536	-22	17	5.47	.569	2	2		
1849	4.7		01.49		6	8.524	.6883	-27	40	1.19	.555	2	2		
1850*	4.5		01.51		6	10.910	.4815	-19	12	3.87	.551	3	2	(Fund.)	
1851	8.5		01.45		7	9.313	.4047	-15	45	34.89	.477	2	2		
1852	7.4		01.52		7	31.971	.3851	-14	51	36.15	.447	2	2		
1853	6.7		01.42		7	44.571	.6015	-24	9	58.54	.431	2	2		
1854*	7.0		01.53		7	47.596	.5285	-21	8	40.56	.427	2	2		
1855	8.0	7.9	01.54		8	2.434	.5859	-23	31	8.81	.408	2	2		
1856	6.4		01.43		8	49.775	.6293	-25	13	24.08	.347	2	2		
1857*	6.5		01.44		8	52.920	.4629	-18	16	44.48	.343	2	2	Pr. Mo. (?)	
1858*	7.3		01.51		8	57.368	.5532	-22	7	36.41	.338	3	3		
1859	7.2		01.49		9	11.256	.6740	-26	57	15.17	.319	2	2	Pr. Mo. (?)	
1860	6.0		01.45		10	12.690	.3812	-14	35	54.56	.240	2	2		
1861*	6.5		01.52		11	8.373	.5015	-19	51	19.97	.169	2	2		
1862	7.1		01.42		12	42.296	.4402	-17	8	29.83	.046	2	2		
1863*	6.0		01.43		13	16.257	.5063	-19	58	26.56	.002	2	2		
1864	8.5	8.3	01.44		13	44.520	.3994	-15	18	11.55	-8.966	2	2		
1865	4.7		01.49		14	37.068	.6038	-23	55	42.06	.897	2	2		
1866*	8.0		01.51		14	41.557	.4720	-18	26	57.91	.890	3	3		
1867*	6.8		01.54		14	47.856	.5467	-21	36	1.34	.882	2	2		
1868	3.0		01.48		15	6.518	.6404	-25	21	10.37	.858	5	5	*Fund.*	
			02.48			6.523				10.51		6	6		
1869	8.2		01.53		15	9.411	.6830	-26	59	31.80	.855	2	2		
1870*	7.3		01.42		16	53.081	.5802	-22	52	56.76	.719	2	2		
1871	6.8	7.0	01.43		17	9.280	.4355	-16	47	1.19	.697	2	2		
1872*	4.6		01.49		18	14.959	.5069	-19	48	11.80	.611	6	6	*Fund.*	
1873	7.3		01.45		18	21.250	.6852	-26	55	5.23	.603	2	2		
1874	8.0		01.52		19	21.887	.6169	-24	14	6.22	.522	2	2		
1875	4.7		02.48		19	35.224	.5914	-23	12	57.65	.505	6	6	*Fund.*	N. p.
			01.51			35.262			13	1.14		3	3		S. f.
1876*	8.5		01.53		19	35.827	.5034	-19	36	23.27	.504	2	2		
1877	7.7		01.45		21	0.333	.6651	-26	1	51.56	.393	2	2		
1878*	5.0		01.43		21	13.619	.4723	-18	13	46.00	.375	2	2	*Fund.*	
1879*	7.5		01.44		21	18.086	.5604	-21	53	33.81	.369	2	2		
1880	7.0		01.45		22	33.444	.4212	-15	59	16.87	.268	2	2		
1881	1.1		01.51		23	16.481	.6725	-26	12	36.73	.212	2	2	*Fund.*	
1882*	7.8		01.50		23	24.431	.5489	-21	20	50.73	.201	2	2		
1883*	8.5	7.9	01.53		23	54.060	.4797	-18	27	14.48	.162	2	2		
1884	7.2		01.52		24	3.615	.7133	-27	41	46.67	.149	2	2		
1885	5.5		01.42		24	7.694	.3843	-14	19	52.36	.143	2	2		
1886	4.6		01.54		24	7.826	.6391	-24	53	42.87	.143	2	2		
1887	6.5		01.43		25	14.435	.6777	-26	19	12.27	.055	2	2		
1888	4.4		01.45		25	24.829	.4325	-16	23	40.83	.040	2	2	*Fund.*	
1889	7.8		01 44		25	38.517	.5817	-22	35	5.64	.023	2	2		
1890	8.0		01.49		25	52.346	.4586	-17	29	49.63	.004	2	2		
1891*	4.7		01.54		26	12.387	.5492	-21	15	8.62	-7.978	2	2	(Fund.)	
1892*	8.5		01.51		26	32.256	.5319	-20	32	16.42	.951	3	3		
1893	8.6		01.52		27	48.539	.6219	-24	4	42.31	.849	2	2		
1894	8.3		01.42		28	20.865	.4095	-15	19	1.04	.805	2	2		
1895*	8.4		01.46		28	55.468	.5143	-19	43	54.79	.759	2	2		

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1896	2.9	1901.48	16 29 39.352	3.7287	−28 0 30.66	−7.700	4	4	*Fund.*
		02.48	39.332		31.06		6	6	
1897*	8.2	01.45	29 41.221	.4844	−18 27 56.74	.697	2	2	
1898	8.5	01.49	29 46.606	.6525	−25 10 26.55	.689	2	2	
1899	7.8	01.51	30 43.242	.3906	−14 26 7.56	.614	3	2	
1900*	8.0	01.53	31 41.162	.5690	−21 51 10.06	.535	2	2	
1901	8.0	01.52	31 52.465	.4428	−16 38 50.01	.520	2	2	
1902*	6.8	01.42	32 19.754	.5908	−22 41 24.62	.483	2	2	
1903	8.3	01.46	32 25.799	.6984	−26 47 17.78	.475	2	2	
1904	7.2	01.44	32 40.580	.4759	−18 1 9.38	.455	2	2	
1905*	7.1	01.45	32 45.147	.4905	−18 37 30.41	.449	2	2	
1906	8.0	01.49	34 4.193	.6823	−26 7 30.00	.341	2	2	
1907*	6.5	01.51	34 40.693	.5307	−20 12 48.44	.292	3	3	
1908	8.0	01.52	35 21.575	.4100	−15 9 40.74	.236	2	2	
1909	6.3	01.53	35 32.426	.6346	−24 16 26.76	.222	2	2	
1910	5.2	01.44	35 47.280	.4667	−17 32 54.91	.202	2	2	Pr. Mo. (?)
1911	8.0	01.46	35 48.778	.4475	−16 44 22.63	.199	2	2	
1912*	5.7	01.42	36 0.932	.5199	−19 43 57.90	.183	2	2	*Fund.*
		02.45	0.963		57.24		2	2	
1913*	8.0 8.1	01.45	37 5.344	.5560	−21 9 8.14	.096	2	2	
		02.48	5.374		8.15		2	2	
1914	6.8	01.49	38 5.048	.7176	−27 16 5.45	.014	2	2	
1915	6.4	01.53	38 44.822	.7478	−28 19 24.22	−6.959	2	2	
1916*	6.5 6.5	01.51	39 7.685	.6046	−22 59 51.59	.928	5	5	*Fund.*
		02.45	7.699		51.73		2	2	
1917	6.7	01.46	39 39.297	.5034	−18 57 8.58	.885	2	2	
1918	8.4	01.42	40 19.866	.4497	−16 43 0.94	.829	2	2	
1919	7.0	01.44	40 43.935	.6679	−25 20 47.26	.796	2	2	
1920	8.0	01.45	42 58.253	.7701	−28 56 43.72	.611	2	2	
1921	8.7 8.4	01.49	43 7.044	.5386	−20 16 45.54	.600	2	2	
		02.45	7.034		45.48		2	2	
1922*	7.0 7.0	01.51	43 37.083	.5743	−21 40 35.49	.558	3	3	
		02.51	37.083		36.07		2	2	
1923	6.7	01.52	43 39.099	.6470	−24 27 53.87	.556	2	2	
1924	6.5	01.42	43 44.933	.4225	−15 29 34.99	.547	2	2	
1925	8.1 8.4	01.46	43 57.359	.6159	−23 16 26.56	.531	2	2	
		02.48	57.327		26.58		2	2	
1926	8.4	01.44	43 58.190	.4850	−18 5 9.22	.529	2	2	
1927	7.3	01.53	43 59.691	.7042	−26 34 3.59	.528	2	2	
1928	8.3	01.54	44 50.900	.7397	−27 48 27.92	.457	2	2	
1929	6.9	01.45	45 10.635	.4443	−16 22 27.89	.429	2	2	
1930	7.4	01.49	45 18.857	.5087	−19 0 53.68	.418	2	2	
1931	6.6	01.42	47 30.893	.5409	−20 14 54.31	.235	2	2	
1932	7.6	01.46	48 8.445	.4808	−17 48 39.22	.183	2	2	
1933	7.2	01.44	48 12.206	.6832	−25 39 50.16	.178	2	2	
1934	7.3 7.6	01.43	48 39.978	.5790	−21 42 56.11	.140	2	2	
		02.45	39.959		56.32		2	2	
1935	8.3	01.49	48 51.976	.6482	−24 20 42.32	.122	2	2	
1936	6.2	01.51	50 15.439	.4536	−16 38 49.07	.006	3	3	
1937	8.7	01.52	50 45.705	.7167	−26 47 34.92	−5.964	2	2	
1938	5.6	01.50	50 46.074	.6137	−22 59 29.02	.964	7	6	*Fund.*
		02.48	46.080		30.13		2	2	
1939	7.5	01.46	51 39.796	.7360	−27 27 13 71	.889	2	2	
1940	8.3 8.0	01 44	52 0.196	.5283	−19 38 6.43	.861	2	2	
1941	7.8	01.45	53 14.505	.4312	−15 39 25.50	.757	2	2	
1942	6.3	01.49	53 50.309	.6681	−24 56 25.94	.708	2	2	
1943	6.1	01.51	54 1.915	.6654	−24 50 12.70	.691	2	2	
1944	7.9	01.52	54 11.462	.7678	−28 29 1.90	.677	2	2	
1945	7.0 7.1	01.42	54 32.103	.5725	−21 18 33.93	.649	2	2	
		02.45	32.077		34.20		2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
1946	7.0	1901.46	16 55 19.779	3.5468	−20 17 18.25	−5.582	2	2	
1947	7.2	01.48	55 23.972	.4696	−17 11 49.22	.576	2	2	
1948	6.5	01.53	56 0.171	.5081	−18 44 17.87	.526	2	2	
1949	7.4	01.45	56 51.236	.7265	−26 57 13.26	.454	2	2	
1950	7.5 7.0	01.49	57 19.225	.6188	−23 0 28.67	.415	2	2	
		02.48	19.245		29.75		2	2	
1951	6.8	01.42	57 51.510	.6880	−25 33 20.14	.370	2	2	
1952	7.5	01.51	57 55.957	.4348	−15 43 25.42	.363	3	3	
1953	6.7	01.51	58 9.617	.7698	−28 26 3.63	.344	2	2	
1954	7.0	01.47	58 34.306	.6871	−25 30 10.30	.309	3	3	*Fund.*
1955	6.5	01.44	58 49.779	.5506	−20 21 14.95	.287	2	2	
1956	6.6 6.6	01 45	17 0 13.475	57.90	−21 25 33.42	.170	2	2	
		02.45	13.525		33.30		2	2	
1957	6.6	01.49	0 41.387	.7131	−26 22 38.91	.131	2	2	
1958	7.3	01.51	1 48.476	.6718	−24 51 56.10	.035	2	2	
1959	6.2	01.42	2 26.368	.4799	−17 28 34.85	−4.983	2	2	
1960	8.5 8.5	01.46	2 30.907	.6244	−23 5 41.69	.975	2	2	
		02.48	30.916		41.27		2	2	
1961	7.0	01.44	4 21.762	.5269	−19 18 33.52	.819	2	2	
1962	7.5	01.52	5 26.279	.5528	−20 17 59.87	.729	2	2	
1963	8.8	01.51	5 36.353	.8027	−29 20 54.70	.714	2	2	
1964	7.3	01.46	5 43.876	.4539	−16 22 4.32	.703	3	3	
1965	6.6	01.42	6 4.939	.6820	−25 7 52.89	.673	2	2	
1966	6.3	01.46	6 9.285	.7529	−27 38 19.63	.667	2	2	
1967	7.7 7.6	01.49	6 21.064	.6189	−22 48 11.32	.650	2	2	
		02.45	21.097		11.42		2	2	
1968	6.8 6.8	01.53	6 40.413	.5842	−21 29 4.88	.623	2	2	
		02.48	40.393		4.64		2	2	
1969	8.2	01.44	8 4.594	.4980	−18 6 0.37	.503	2	2	
1970	8.5	01.47	8 59.085	.5403	−19 44 50.15	.426	2	2	
1971	8.0	01.51	9 0.702	.7198	−26 24 56.95	.423	2	2	
1972	7.2	01.53	10 54.699	.4917	−17 48 8.03	.261	2	2	
1973	8.4	01.46	11 22.388	.7914	−28 49 37.10	.222	2	1	
1974	8.4	01.44	11 37.433	.7572	−27 39 39.40	.201	2	2	S. f. 26^{s}
1975	6.0	01.47	11 54.654	.6592	−24 10 41.03	.175	2	2	S. pair.
q	7.0 7.0	02.45	12 0.674	.6533	−23 57 45.33	.166	2	2	Pr. Mo. +^{s}.006 −0″.12
1976	6.5	01.49	12 33.654	.4524	−16 12 15.97	.119	2	2	
1977	8.8 8.8	01.51	12 52.689	.6170	−22 36 3.52	.093	2	2	
		02.48	52.712		3.30		2	2	
1978	7.5	01.52	13 37.618	.5193	−18 50 57.08	.028	2	2	
1979	7.1	01.42	14 6.506	.8061	−29 15 39.55	−3.987	2	2	
1980*	4.5	01.46	15 0.592	.5757	−21 0 20.68	.909	2	2	*Fund.*
		02.45	0.658		20.31		2	2	
1981	3.4	01.47	15 52.019	.6812	−24 53 59.35	.837	4	4	*Fund.*
1982	7.7	01.47	16 10.501	.7156	−26 6 55.75	.811	2	2	
1983	8.0	01.51	16 34.271	.4797	−17 14 31.50	.776	2	2	
1984*	8.1	01.54	17 0.953	.5533	−20 7 6.00	.737	2	2	1′ N. f. 15^{s}.0
1985	5.6	01.52	17 3.918	.7719	−28 2 44.69	.733	2	2	
1986	7.2 7.5	01.53	17 10.019	.6274	−22 54 46.29	.725	2	2	
		02.48	10.031		46 35		2	2	
1987	6.7	01.42	17 50.957	.4477	−15 56 34.28	.666	2	2	
1988*	6.5 6.3	01.46	18 43.118	.5862	−21 20 54.28	.592	2	2	
		02.45	43.154		53.88		2	2	
1989	6.3	01.44	18 45.730	.5085	−18 21 10.31	.587	2	2	
1990	7 5	01.47	19 49.709	.7577	−27 30 31.80	.495	2	2	
1991	4.5	01.49	20 15.707	.6607	−24 5 0.53	.458	2	2	Pr. Mo. −^{s}.003 −0″.12
		02.48	15.778		0.39		2	2	
1992	6.5	01.51	20 43.883	.7106	−25 51 18.87	.417	2	2	
1993	4.4	01.52	20 58.068	.8260	−29 46 35.26	.398	2	2	Pr. Mo. ^{s}.000 −0″.15
1994	7.6	01.42	22 6.906	.8023	−28 58 27.65	.299	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
1995*	7.8 6.3	1901.46	17 22 18.266	3.5753	− 20 52 50.08	− 3.283	2 2	
1996	8.5 8.7	01.44	22 39.410	.6185	− 22 29 52.38	.252	2 2	
		02.45	39.421		52.45		2 2	
1997	8.4	01.53	23 31.794	.4634	− 16 30 33 76	.176	2 2	
1998*	7.8	01.49	23 49.640	.5369	− 19 23 33.69	.151	2 2	
1999	4.9	01.48	25 18.807	.6574	− 23 53 7.42	.022	9 9	*Fund.*
		02.48	18.832		7.06		2 2	
2000	6.2	01.52	25 31.766	.7224	− 26 11 35.62	.003	2 2	
2001	8.8	01.46	25 38.606	.7763	− 28 2 33.17	− 2.994	2 2	S. p.
Anon.		01.45	25 48.961	.7762	− 28 2 24.58	.980	1 1	N. f.
2002	7.0	01.54	26 40.704	.8229	− 29 34 40.53	.904	2 2	
2003	7.0	01.49	27 9.949	.4874	− 17 25 26.31	.862	2 2	
2004	8.1	01.51	27 28.274	.5724	− 20 42 22.34	.836	2 2	
2005	6.5 6.6	01.52	29 17.506	.6069	− 21 58 35.69	.678	2 2	
		02.45	17.522		35.59		2 2	
2006	8.0	01.42	29 26.427	.6777	− 24 33 34.50	.665	2 2	
		02.48	26.457		34.48		2 2	
2007	7.0	01.46	31 9.316	.5270	− 18 55 39.52	.517	2 2	
2008	8.2	01.44	31 33.360	.5716	− 20 37 38.12	.482	2 2	
α	7.9 8.5	02.45	31 42.264	.6443	− 23 19 37.90	.469	2 2	N. p. dup.
2009	3.7	01.52	31 51.595	.4361	− 15 20 8.59	.456	8 8	*Fund.*
2010	6.5	01.54	31 51.901	.4404	− 15 30 35.34	.455	2 2	
2011	7.5	01.51	32 42.001	.7884	− 28 21 7.05	.382	2 2	
2012	6.3 6.3	01.52	32 44.292	.6045	− 21 51 12 57	.379	2 2	
		02.48	44.261		12.92		2 2	
2013	7.6	01.53	32 51.197	.7450	− 26 52 38.37	.369	2 2	
2014	7.5	01.42	32 57.829	.8223	− 29 28 21.21	.359	2 2	
2015	8.3	01 46	33 16.258	.4880	− 17 23 19.27	.333	2 2	
2016	8.3	01 44	34 23.780	.7078	− 25 34 9.62	.236	2 2	
2017	7.8 7.8	01.47	34 43.818	.6577	− 23 46 56.35	.206	2 2	
		02.45	43.819		56.04		2 2	
2018	8.0 8.2	01.49	35 23.676	.5404	− 19 24 13.85	.148	2 2	
2019	8.0	01.51	35 50.595	.7435	− 26 47 37 97	.109	2 2	
2020	7.8	01.52	37 5.357	.8441	− 30 7 43.46	.001	2 2	
2021	5.0	01.47	37 26.201	.5999	− 21 38 4 47	− 1.971	6 6	*Fund.*
		02.48	26.227		4 50		2 2	
2022	7.5	01.46	38 18.924	.4969	− 17 41 52.11	.894	2 2	
2023	7.0	01.53	38 31.999	.4745	− 16 49 5.79	.875	2 2	
π	8.8 8.8	02.45	38 45.702	.6827	− 24 38 23.25	.855	2 2	
2024	8.8	01.47	39 1.200	.6330	− 22 50 43.28	.833	2 2	
		02.48	1.240		42.91		2 2	
2025	8.2	01.49	39 44.003	.5611	− 20 9 43.02	.770	2 2	
2026	8.3	01.51	40 31.417	.7136	− 25 42 53.72	.702	2 2	
2027	Var.	01.52	41 15.916	.7744	− 27 47 33.82	.636	2 2	*Fund.*
2028	7.0	01.42	41 36.110	.5070	− 18 4 9.80	.608	2 2	
2029	6.8	01.46	42 50.684	.8593	− 30 33 45.96	.499	2 2	
2030	7.8	01.44	43 5.809	.8197	− 29 16 51.90	.477	2 2	
2031	7.4	01.47	43 39.709	.5568	− 19 58 25.24	.427	2 2	
2033	7.4 7.3	01.54	43 50.503	.6707	− 24 10 27.87	.413	2 2	
		02.45	50.524		27.79		2 2	
2032	8.2	01.49	43 50.751	.7451	− 26 46 44.49	.412	2 2	
2034	8.7 8.7	01.52	44 38.080	.6084	− 21 54 2.98	.343	2 2	
		02.48	38.086		2.69		2 2	
2035	7.0 7.0	01.53	45 3.600	.6354	− 22 53 23.70	.306	2 2	
		02.51	3.626		24.24		2 2	
2036	8.4	01.42	45 32.647	.7994	− 28 35 40.59	.264	2 2	
2037	7.9	01 54	45 43.243	.7156	− 25 44 43.90	.249	2 2	
2038	8.3	01 46	45 50.847	.5852	− 21 1 53.88	.237	2 2	
2039	6.7	01.44	46 25.765	.5342	− 19 5 42.49	.186	2 2	
2040	7.2	01.47	46 31.749	.4788	− 16 56 32.92	.177	2 2	

No.	Mag.		Epoch.	R. A. 1900.0			Precess.	Decl. 1900.0			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
2041	6.8	7.0	1901.49	17	47	17.853	3.7599	−27	15	34.30	−1.110	2	2	
2042	8.2		01.51		48	9.665	.4904	−17	23	25.89	.036	2	2	
2043	6.6	6.4	01.52		48	44.726	.6910	−24	52	2.38	−0.984	2	2	
			02.45			44.742				1.55		2	2	
2044	6.5		01.42		50	1.986	.5265	−18	47	4.06	.872	2	2	
2045	7.2		01.46		50	9.758	.7454	−26	45	17.71	.860	2	2	
2046	7.2	7.1	01.44		50	20.131	.6101	−21	56	19.93	.845	2	2	
			02.48			20.174				20.02		2	2	
2047	5.8		01.47		50	22.986	.7838	−28	2	56.81	.840	2	2	
2048	8.0	7.9	01.49		50	24.498	.6495	−23	22	26.79	.838	2	2	
			02.51			24.485				26.51		2	2	
2049	8.8		01.51		51	17.403	.5633	−20	11	2.37	.763	2	2	
2050	5.8		01.54		52	18.401	.8051	−28	44	52.69	.672	2	2	
2051	4.6		01.52		53	41.200	.6617	−23	48	25.48	.552	4	4	*Fund.*
			02.45			41.191				25.03		2	2	
2052	8.1		01.42		53	50.077	.6976	−25	4	43.89	.539	2	2	
			02.48			50.126				44.56		2	2	
2053	8.2	7.8	01.46		53	51.021	.8401	−29	53	7.43	.538	2	2	
2054	6.5		01.44		54	3.131	.5674	−20	19	54.25	.520	2	2	
2055	6.1		01.47		55	34.472	.4847	−17	9	10.78	.387	2	2	
2056	6.0	6.0	01.49		55	50.852	.6334	−22	46	39.46	.363	2	2	
			02.51			50.803				39.23		2	2	
2057	7.0		01.51		55	58.599	.5351	−19	6	13.05	.352	2	2	
2058	7.4		01.54		56	36.358	.7777	−27	49	33.58	.297	2	2	
2060	8.0		01.52		56	39.138	.5989	−21	30	28.43	.293	2	2	
2059	6.5		01.53		56	39.316	.5782	−20	44	11.75	.293	2	2	
2061	5.4		01.46		56	43.390	.6752	−24	16	53.56	.286	2	2	
2062	7.8		01.42		56	52.632	.4942	−17	31	18.73	.274	2	2	
2063	7.4		01.44		57	10.225	.7334	−26	19	12.15	.248	2	2	
2064	5.7		01.47		57	44.549	.6775	−24	21	45.52	.197	2	2	
2065	Var.		01.55		58	37.976	.8311	−29	35	4.13	.120	3	3	
2066	6.5		01.49		59	2.543	.6786	−24	24	13.18	.084	2	2	
			02.45			2.573				13.19		2	2	
γ Sagit.	3.0		01.53		59	23.011	.8572	−30	25	31.89	−0.054	4	4	*Fund.*
2067	7.3		01.56	18	0	49.361	.5323	−18	59	35.52	+0.072	2	2	
2068*	6.4	6.4	01.52		1	11.454	.5975	−21	27	15.20	.105	2	2	
			02.48			11.485				15.13		2	2	
2069*	8.3	8.1	01.53		1	41.034	.6428	−23	6	59.19	.147	2	2	
			02.45			41.068				58.47		2	2	
2070	4.7		01.54		1	44.991	.7970	−28	28	5.74	.153	2	2	
2071	5.9		01.55		2	0.385	.4852	−17	10	3.32	.175	2	2	
2072	7.6		01.49		2	36.303	.7769	−27	47	52.63	.228	2	2	
2073	7.8		01.51		2	45.303	.5614	−20	6	3.67	.240	2	2	
2074	7.7		01.56		3	2.410	.7276	−26	7	20.83	.266	2	2	Pr. Mo. −^{s}.004 −0″.34
2075	8.5		01.47		3	32.668	.6878	−24	43	51.66	.311	2	2	
2076*	8.0		01.52		4	42.147	.6192	−22	15	30.60	.411	2	2	
2077	7.9		01.53		5	10.506	.5211	−18	33	59.93	.453	2	2	
2078	6.7		01.54		5	19.185	.5550	−19	51	41.60	.465	2	2	mean: dup. 0″.9
2079	7.1		01.49		5	36.899	.8105	−28	55	22.23	.491	2	2	
2080*	5.3		01.55		5	37.189	.6594	−23	43	17.46	.491	2	2	
			02.48			37.179				17.28		2	2	
2081	7.5		01.51		5	59.937	.5704	−20	26	42.66	.525	2	2	
2082*	4.1		01.52		7	46.964	.5873	−21	5	5.94	.681	2	2	*Fund.*
			02.49			46.978				5.92		8	8	
2083	7.6		01.56		7	53.887	.7685	−27	31	43.94	.691	2	2	
2084*	5.9		01.53		8	15.428	.6049	−21	44	23.26	.723	2	2	
2085	6.8		01.49		8	41.197	.8388	−29	51	4.88	.760	2	2	
2086	8.2		01.51		8	59.685	.7184	−25	49	6.99	.787	2	2	
2087	5.6		01.54		9	14.968	.5785	−20	45	28.65	.809	2	2	
2088	6.2		01.55		9	15.905	.5694	−20	25	3.25	.810	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.			Precess.	Decl. 1900.0.			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
2089	6.8		1901.47	18	9	38.258	3.5241	−18	41	31.65	+0.842	2	2	
2090*	7.6		01.56		10	27.588	.6649	−23	56	2.51	.914	2	2	S. p.
2091	6.0		01.52		11	22.484	.4909	−17	24	29.81	.994	2	2	
2092	4.7		01.49		11	47.658	.7547	−27	4	43.85	+1.032	2	2	
2093*	8.2	7.9	01.53		11	54.681	.6219	−22	22	45.41	.042	2	2	
2094	2.8		01.54		14	35.516	.8384	−29	52	14.70	.276	8	8	*Fund.*
			02.48			35.527				14.21		6	6	
2095	7.0		01.49		14	59.760	.7265	−26	7	46.01	.311	2	2	
2096	7.5		01.56		15	21.997	.6930	−24	57	36.22	.343	2	2	
2097	Var.		01.53		15	29.997	.5290	−18	54	16.04	.355	2	2	
2098	6.5		01.52		15	40.480	.7956	−28	28	32.27	.370	2	2	
2099*	7.2		01.55		15	59.222	.6374	−22	58	3.42	.397	2	2	
2100	8.0	7.9	01.54		17	22.291	.5760	−20	42	10.78	.518	2	2	
2101	8.3		01.51		17	34.578	.6030	−21	42	49.90	.536	2	2	
2102	8.3		01.49		18	57.002	.6784	−24	28	4.70	.656	2	2	
2103	8.4		01.52		19	28.460	.7654	−27	29	44.70	.702	2	2	
2104	6.0		01.51		21	25.814	.8368	−29	52	37.44	.872	2	2	
2105	3.1		01.53		21	47.955	.7063	−25	28	37.70	.904	4	4	*Fund.*
			02.49			47.941				37.86		8	8	
2106	6.6		01.53		21	51.784	.7448	−26	49	0.48	.910	2	2	
2107	7.3		01.54		22	3.235	.6387	−23	3	39.90	.926	2	2	
2108	6.7		01.55		22	6.355	.5010	−17	51	39.51	.930	2	2	
2109	7.5		01.52		23	52.936	.5830	−21	1	0.38	+2.085	2	2	
2110	7.4		01.54		24	10.689	.8048	−28	51	40.08	.111	2	2	
2111	5.7		01.51		24	19.158	.5245	−18	47	32.35	.123	2	2	
2112	8.0		01.53		24	34.570	.6043	−21	49	10.31	.146	2	2	
2113	7.5		01.56		24	36.905	.5653	−20	21	13.35	.149	2	2	
2114	5.2		01.55		25	34.722	.5160	−18	28	16.79	.233	2	2	*Fund.*
2115	8.2		01.49		27	34.629	.7058	−25	31	21.38	.406	2	2	
2116	5.9		01.51		27	46.971	.6659	−24	6	24.72	.424	2	2	
			02.51			46.926				25.23		2	2	
2117	7.2		01.52		27	49.668	.8682	−30	57	28.87	.429	2	2	
2118	7.8		01.54		29	17.880	.7601	−27	25	13.23	.556	3	2	
2119	8.0	7.9	01.54		29	19.334	.6124	−22	10	8.78	.558	2	2	
			02.54			19.249				8.98		2	2	
2120	6.5		01.55		29	23.263	.5790	−20	55	6.92	.563	2	2	
2121	7.0		01.56		29	29.696	.5377	−19	20	47.71	.573	2	2	
2122	6.9		01.49		29	36.684	.8307	−29	46	41.76	.583	2	2	
2123	7.0		01.51		30	43.914	.7943	−28	35	29.09	.680	2	2	
2124	7.4		01.52		31	0.584	.7110	−25	44	46.48	.704	2	2	Pr. Mo. $+^{s}.010$ $-0''.28$
2125	6.3	6.3	01.53		31	55.199	.5932	−21	28	49.50	.783	2	2	
			02.51			55.152				49.81		2	2	
2126	7.0		01.54		32	3.117	.4849	−17	18	56.71	.794	2	2	
2127	5.8	5.9	01.55		32	25.771	.6501	−23	35	24.83	.827	2	2	
			02.54			25.774				24.89		2	2	
2128	6.0		01.56		32	55.629	.5836	−21	8	4.33	.870	2	2	Pr. Mo. $-^{s}.006$ $-0''.18$
2129	6.5		01.49		33	57.743	.5576	−20	9	35.19	.960	2	2	
2130	8.2		01.51		34	52.438	.7406	−26	49	58.68	+3.039	2	2	
2131	7.7		01.52		35	6.714	.7761	−28	3	0.62	.059	2	2	
2133	6.2		01.60		35	45.704	.6581	−23	55	35.61	.116	10	10	*Fund.*
			02.51			45.640				35.94		2	2	
2132	8.5		01.53		35	45.993	.5034	−18	4	52.71	.116	2	2	
2134	6.5		01.55		37	1.584	.5363	−19	22	47.47	.224	2	2	
2135	7.3	7.4	01.56		37	18.456	.6188	−22	30	29.36	.249	2	2	
			02.54			18.454				29.02		2	2	
2136	7.5		01.49		37	34.902	.5789	−21	1	1.41	.273	2	2	
2137	5.7	5.8	01.51		38	40.708	.6898	−25	6	40.43	.368	2	2	
			02.51			40.719				40.40		2	2	
2138	3.3		01.52		39	24.536	.7460	−27	5	36.90	.430	4	4	*Fund.*
2139	7.4		01.54		39	48.071	.4911	−17	38	51.45	.464	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
				h m s	s	° ′ ″	″			
2140	5.6	5.6	1901.56	18 40 18.771	3.6173	−22 29 48.80	+3.508	2	2	
			02.54	18.777		48.79		2	2	
2141	7.1		01.55	40 25.290	.8239	−29 44 10.38	.517	2	2	
2142	7.3		01.49	41 19.013	.7828	−28 23 13.67	.595	2	2	
2143	8.4		01.51	41 51.574	.6401	−23 21 56.40	.641	2	2	
			02.51	51.630		56.87		2	2	
2144	8.8		01.52	41 59.072	.5787	−21 4 17.83	.652	2	2	
2145	7.0		01.53	42 53.769	.5171	−18 42 42.33	.731	2	2	N. p.
2146	8.4		01.54	43 29.510	.7047	−25 43 32.71	.781	2	2	
2147	5.5		01.55	43 44.068	.5613	−20 26 17.59	.802	2	2	
2148	7.5		01.49	44 24.001	.7372	−26 53 5.32	.860	2	2	
2149	6.1		01.53	44 49.808	.6094	−22 16 35.71	.896	4	4	*Fund.*
			02.51	49.815		36.09		2	2	
2150	6.8		01.52	45 31.981	.4797	−17 16 15.69	.956	2	2	
2151	8.0	7.9	01.53	45 44.293	.6768	−24 46 18.08	.974	2	2	
			02.54	44.271		18.10		2	2	
2152	6.5		01.54	46 15.987	.8131	−29 29 51.68	+4.020	2	2	
2153	7.3		01.55	46 51.416	.7646	−27 52 39.31	.071	2	2	
2154	7.2		01.56	47 14.979	.5166	−18 45 25.03	.104	2	2	
2155	6.0		01.49	48 1.550	.5868	−21 28 57.00	.170	2	2	
2156	5.0	5.0	01.51	48 7.965	.6236	−22 52 4.91	.179	2	2	
			02.51	7.981		4.46		2	2	
2157	2.3		01.53	49 3.894	.7212	−26 25 15.82	.259	2	2	*Fund.*
2158	5.2		01.54	49 4.433	.6212	−22 47 46.65	.260	2	2	
2159	5.9		01.52	49 57.398	.6343	−23 18 3.81	.336	2	2	
2160	7.3		01.55	49 58.688	.4582	−16 28 30.93	.337	2	2	N. f. 13^s.3
2161	7.3		01.56	50 35.978	.6735	−24 44 58.32	.390	2	2	
p	8.8	9.3	02.54	51 4.352	.6526	−23 59 54.68	.430	2	2	S. f. dup. 10″
2162	5.0		01.49	51 23.953	.5669	−20 47 14.28	.458	2	2	
2163	7.0		01.51	51 43.032	.5281	−19 17 4.70	.485	2	2	
2164	3.5		01.52	51 45.856	.5785	−21 14 17.01	.490	2	2	Pr. Mo. +^{s}.001 −0″.01
			02.51	45.869		16.83		2	2	
2165	7.0		01.53	53 35.677	.5124	−18 42 6.20	.645	2	2	
2166	7.5		01.54	53 43.432	.7689	−28 11 13.34	.657	2	2	
2167	8.3	7.8	01.55	54 4.577	.7151	−26 19 11.27	.686	2	2	
2168	7.8		01.49	54 37.039	.4848	−17 37 21.31	.732	2	2	
2169	6.5	6.5	01.51	55 36.065	.6186	−22 50 10 67	.816	2	2	
			02.51	36.093		11.07		2	2	
2170	5.7		01.52	56 20.434	.6764	−24 59 5.89	.879	2	2	Pr. Mo. −^{s}.005 −0″.18
2171	5.9		01.53	57 11.180	.5281	−19 23 23.02	.950	2	2	
2172	7.8		01.49	57 38.306	.5505	−20 16 26.59	.988	2	2	
2173	8.2		01.54	57 42.729	.6507	−24 4 43.08	.995	2	2	
2174	3.9		01.56	58 41.445	.5918	−21 53 17.06	+5.078	2	2	Pr. Mo. +^{s}.002 −0″.05
			02.54	41.449		17.10		2	2	
2175	7.6		01.51	59 0.632	.7107	−26 17 16.30	.105	2	2	
2176	3.5		01.57	19 0 41.822	.7529	−27 49 0.09	.248	13	12	*Fund.*
2177	6.2		01.55	1 7.116	.4513	−16 22 56.17	.283	2	2	S. wide dup.
2178	6.5		01.59	1 13.075	.7807	−28 47 26.73	.291	2	2	
2179	6.5		01.60	1 17.174	.5134	−18 53 30.04	.297	2	2	
2180	7.1		01.61	1 31.076	.4760	−17 23 45.59	.317	2	2	
2181	6.7		01.56	2 8.016	.6677	−24 48 48.55	.368	2	2	
2182	5.5		01.62	2 24.184	.5268	−19 26 48.37	.392	2	2	
2183	7.1	7.0	01.63	2 41.906	.6278	−23 20 50.67	.416	2	2	
			02.51	41.953		50.62		2	2	
2184	8.6	8.6	01.54	3 30.605	.6057	−22 32 12.59	.484	2	2	
			02.54	30.559		12.31		2	2	
2185	3.1		01.56	3 49.039	.5703	−21 10 57.56	.510	4	4	*Fund.*
			02.51	49.048		57.70		2	2	
2186	6.5		01.61	3 54.260	.5390	−19 57 40.95	.517	2	2	
2187	8.0		01.55	4 54.849	.7748	−28 41 49.08	.602	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
				h m s	s	° ′ ″	″			
2188	6.3		1901.56	19 7 4.175	3.6986	−26 4 27.81	+5.783	2	2	
Anon.		8.5	01 54	7 12.622	.6881	−25 42 6.62	.795	1	1	
2189	7.1		01.55	7 44.335	.7250	−27 2 35.50	.839	2	2	
2190	7.3	7.3	01.56	8 9.568	.5946	−22 13 49.70	.875	2	2	
			02.51	9.616		49.85		2	2	
2191	6.8		01.59	9 3.296	.4752	−17 31 6.50	.949	2	2	
2192	5.2		01.62	9 24.525	.6788	−25 25 44.40	.979	2	2	*Fund.*
			02.54	24.580		44.94		2	2	
2193	6.4		01.60	9 27.733	.6496	−24 20 59.72	.984	2	2	Pr. Mo. +^{s}.007 −0″.13
2194	7.3		01.62	9 32.921	.5355	−19 57 34.33	.990	2	2	
2195	7.1		01.63	9 41.837	.4445	−16 16 18.16	+6.003	2	2	
2196	7.2		01.54	10 31.733	.7738	−28 50 34.30	.073	2	2	
2197	4.9		01.57	11 47.074	.5134	−19 7 51.20	.177	7	7	*Fund.*
			02.53	47.079		51.35		4	4	
2198	8.5		01.62	12 16.469	.7475	−27 59 20.61	.217	2	2	
2199	8.3		01.63	13 14.755	.6304	−23 44 22.54	.298	2	2	
2200	6.0		01.60	13 18.007	.4292	−15 42 37.50	.303	2	2	Pr. Mo. −^{s}.008 −0″.30
2201	8.3	8.1	01.61	13 20.413	.5612	−21 4 25.84	.306	2	2	
2202	7.2		01.54	14 36.788	.6465	−24 23 30.49	.412	2	2	Pr. Mo. −^{s}.002 −0″.16
2203	5.7		01.55	14 38.570	.5991	−22 35 18.56	.414	2	2	
2204	7.2		01.56	15 34.845	.6987	−26 21 10.07	.492	2	2	
2205	6.5		01.62	15 45.556	.5180	−19 25 17.09	.506	2	2	
2206	3.9		01.63	15 52.396	.4839	−18 2 7.43	.516	2	2	
2207	4.7		01.59	16 0.029	.4381	−16 8 32.92	.527	2	2	
2208	6.1		01.60	16 0.944	.4950	−18 29 38.51	.528	2	2	
2209	7.0		01.61	16 45.318	.5526	−20 49 47.58	.590	2	2	
2210	5.9		01.54	18 16.211	.7436	−28 3 33.15	.714	2	2	
2211	5.1		01.55	19 11.425	.6508	−24 42 9.99	.790	2	2	
2212	5.9		01.56	19 26.591	.6362	−24 9 29.56	.811	2	2	
2213	5.5		01.59	20 21.323	.5788	−21 58 28.83	.885	2	2	
2214	8.3		01.60	20 37.102	.6784	−25 46 53.78	.907	2	2	
2215	7.9		01.61	21 0.955	.4552	−16 58 57.02	.940	2	2	
2216	8.2		01.54	22 11.583	.5457	−20 43 3.85	+7.036	2	2	
2217	7.8		01.55	22 11.986	.5166	−19 32 40.89	.037	2	2	
2218	7.0		01.56	22 16.271	.4925	−18 33 40.95	.042	2	2	S. f.
2219	5.6		01.59	23 41.084	.7136	−27 11 25.57	.158	2	2	N. p. wide dup.
2220	8.8		01.60	24 21.451	.5940	−22 42 11.26	.213	2	2	
2221	7.5		01.61	24 51.989	.6312	−24 9 35.38	.255	2	2	
2222	6.5		01.62	24 57.966	.5635	−21 31 12.77	.263	2	2	
2223	7.2		01.63	25 9.278	.6782	−25 56 40.52	.278	2	2	
2224	8.5		01.54	25 38.476	.4738	−17 52 57.62	.318	2	2	
2225	7.3		01.55	25 49.123	.7455	−28 25 22.67	.332	2	2	
2226	7.0		01.56	25 51.349	.5152	−19 35 47.33	.335	2	2	
2227	7.2		01.59	28 35.137	.4411	−16 35 25.53	.557	2	2	
2228	8.3		01.54	28 47.895	.5778	−22 13 2.71	.574	2	2	
2229	8.0		01.55	29 38.062	.6103	−23 31 41.56	.642	2	2	N. wide dup.
2230	6.8		01.56	29 40.805	.5465	−20 59 47.64	.646	2	2	
2231	8.0		01.60	29 56.443	.6778	−26 7 13.51	.667	2	2	
2232	5.8		01.62	29 57.414	.6465	−24 56 17.91	.669	2	3	
2233	6.2		01.62	30 36.360	.4988	−19 4 24.75	.720	2	2	
2234	4.4		01.59	30 37.381	.6502	−25 6 15.83	.722	3	3	*Fund.*
			02.53	37.354		15.88		4	4	
2235	6.0		01.63	31 15.231	.4835	−18 27 11.69	.772	2	2	
2236	6.4		01.56	32 41.827	.7487	−28 49 59.08	.889	2	2	
2237	8.2		01.55	32 45.514	.7145	−27 35 49.60	.894	2	2	
2238	6.8	7.0	01 54	33 27.473	.4507	−17 8 14.29	.951	2	2	S. p. 1^{s}
2239	6.2		01.59	33 48.898	.6094	−23 39 18.13	.979	2	2	N. p.
2240	7.3		01.60	33 58.606	.5748	−22 17 28.07	.992	2	2	
2241	6.2		01.61	34 6.488	.6091	−23 39 28.10	+8.003	2	2	S. f.
2242	6.8		01.62	34 11.558	.4097	−15 23 43.88	.009	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
2243	8.0	1901.63	19 34 55.500	3.5437	−21 4 7.65	+8.068	2	2	
2244	5.5	01.55	34 59.726	.4352	−16 31 19.83	.074	2	3	
2245	8.0	01.55	36 15.467	.6855	−26 40 40.30	.174	2	2	
2246	6.8	01.56	36 18.595	.6437	−25 5 33.22	.179	2	2	
2247	5.0	01.61	36 47.988	.4301	−16 21 29.17	.218	2	3	
2248	8.3	01.60	37 3.252	.4785	−18 26 3.86	.238	2	2	
2249	8.0	01.61	37 22.667	.4999	−19 20 52.27	.263	2	2	
2250	5.5	01.62	37 51.412	.4143	−15 42 6.63	.302	2	2	Pr. Mo. +ˢ.011 −0″.20
2251	7.5	01.54	38 33.958	.5903	−23 5 39.77	.358	2	2	
2252	7.7	01.63	40 9.440	.7029	−27 30 33.75	.484	2	2	
2253	5.1	01.57	40 31.746	.5128	−20 0 5.41	.514	5	5	*Fund.*
		02.51	31.748		5.31		2	2	
b	7.2 7.1	02.54	40 35.022	.5554	−21 45 56.80	.518	2	2	N. p. dup. 3″
2254	7.5	01.59	40 52.700	.6813	−26 44 0.78	.542	2	2	
2255	8.3	01.60	41 6.856	.6099	−23 58 44.66	.561	2	2	
2256	7.0	01.61	41 24.314	.4490	−17 19 21.28	.583	2	2	
2257	8.1 7.8	01.54	42 5.982	.4794	−18 39 0.08	.638	2	2	Fol. 35ˢ.1
2258	6.8	01.62	42 6.385	.5402	−21 12 14.29	.639	2	2	
2259	7.7 8.0	01.55	44 18.443	.5827	−23 1 52.36	.812	2	2	
		02.51	18.430		52.21		2	2	
2260	8.5	01.56	44 25.864	.5546	−21 53 38.34	.822	2	2	
2261	8.0	01.61	44 46.833	.4089	−15 40 27.91	.850	2	2	
2262	7.5	01.60	45 0.460	.7023	−27 43 29.60	.867	2	2	
2263	7.7	01.59	45 11.521	.6349	−25 9 7.78	.881	2	2	
2264	8.2 8.2	01.62	46 1.604	.5065	−19 57 1.93	.946	2	2	
		02.54	1.626		1.54		2	2	
2265	6.2	01.63	46 23.344	.4908	−19 17 56.43	.975	2	2	
2266	7.8	01.54	46 42.831	.4407	−17 8 30.64	+9.001	2	2	
2267	8.2	01.59	46 59.198	.5382	−21 19 23.94	.022	2	2	
2268	6.8	01.56	47 27.908	.3887	−14 51 33.67	.059	2	2	
2269	8.5 8.1	01.55	47 37.771	.4634	−18 10 0.32	.072	2	2	
2270	6.4	01.63	48 18.494	.6069	−24 11 23.80	.125	2	2	Pr. Mo. −ˢ.010 −0″.45
2271	8.2 8.4	01.63	49 37.581	.5461	−21 46 9.26	.227	2	2	
2272†	5.0	01.59	49 42.921	.6654	−26 33 53.20	.235	6	6	*Fund.*
2273	8.0 7.6	01.55	50 42.293	.5828	−23 19 48.19	.311	2	2	
2274	4.7	01.56	50 48.733	.6866	−27 26 6.28	.320	2	2	
2275	5.0	01.59	52 16.765	.4051	−15 45 23.89	.433	2	2	
2276	5.0	01.54	52 51.775	.6586	−26 27 58.28	.478	2	2	
2277	8.0	01.63	53 17.242	.4598	−18 13 45.34	.510	2	2	
2278	6.5	01.55	53 38.616	.5588	−22 28 56.46	.538	2	2	
		02.51	38.629		56.49		2	2	
2279	8.0	01.56	54 30.667	.5257	−21 7 47.66	.604	2	2	
2280	7.0 7.0	01.63	54 41.268	.5021	−20 7 49.53	.618	2	2	
		02.54	41.272		49.17		2	2	
2281	8.5	01.62	54 49.020	.6055	−24 27 34.58	.628	2	2	
2282	6.0	01.59	55 27.352	.5694	−23 0 42.94	.678	2	2	
2283	7.3	01.60	55 48.903	.4331	−17 8 33.56	.705	2	2	
2284	5.8	01.62	56 22.540	.3616	−13 54 51.14	.748	4	4	*Fund.*
		02.72	22.523		50.72		4	4	
c Sagit.	4.6	02.59	56 30.625	.6928	−27 59 16.00	.758	8	8	*Fund.*
2285	7.6	01.54	56 56.555	.6492	−26 19 11.40	.790	2	2	
2286	7.3	01.55	57 8.043	.4697	−18 49 22.05	.805	2	2	
2287	6.4	01.56	57 48.781	.5634	−22 52 35.07	.858	2	2	
2288	7.2	01.63	57 53.724	.3992	−15 41 35.01	.864	2	3	
2289	7.0	01.59	59 5.073	.5316	−21 35 44.97	.954	2	2	
2290	7.2	01.60	59 5.977	.6659	−27 5 45.38	.955	2	2	
2291	8.5 8.3	01.55	20 0 38.629	.5027	−20 25 40.00	+10.072	2	2	
2292	7.8	01.56	1 20.446	.4356	−17 28 54.98	.125	2	2	
2293	7.5	01.62	1 41.913	.5895	−24 10 13.10	.152	2	2	
2294	7.0	01.59	2 26.404	.4706	−19 5 34.70	.208	2	2	
†2272	5.0	02.73	19 49 42.956	3.6654	−26 33 53.20	+9.235	2	2	*Fund.*

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
2295	6.6	1901.60	20 2 50.726	3.3871	−15 19 7.05	+10.239	2	2	Pr. Mo. ^{s}.000 −0″.15
2296	7.5	01.62	2 58.813	.3704	−14 32 40.12	.248	2	2	
2297	7.2	01.55	3 42.827	.5097	−20 53 2.22	.304	2	2	Pr. Mo. +^{s}.003 −0″.12
2298	7.5 7.4	02.71	4 5.126	.6205	−25 34 37.28	.331	2	2	
2299	8.0	01.56	5 29.966	.5929	−24 31 20.34	.437	2	2	
2300	8.0	01.59	5 31.377	.5390	−22 14 49.89	.439	2	2	
2301	8.5 8.7	01.60	5 39.063	.3949	−15 47 31.92	.448	2	2	
2302	6.0	01.58	6 51.603	.3329	−12 54 37.83	.538	3	3	*Fund.*
2303	8.5	01.62	6 52.744	.6389	−26 29 22.62	.540	2	2	
2304	7.5	01.63	8 25.150	.5376	−22 20 27.02	.654	2	2	
2305	7.8 7.8	02.71	8 43.480	.4486	−18 23 49.92	.676	2	2	
2306	8.0 7.5	01.56	8 55.991	.4729	−19 30 36.17	.693	2	2	
2307	7.2	01.60	9 3.299	.6564	−27 19 53.62	.701	2	2	Pr. Mo. +^{s}.094 −0″.24
2308	7.3	01.59	9 31.740	.4207	−17 9 15.09	.737	2	2	
2309	7.0 7.0	02.73	9 32.621	.3472	−13 41 13.14	.738	2	2	
2310	8.3	01.62	9 45.615	.3762	−15 5 13.78	.753	2	2	Pr. Mo. (?)
2311	7.6	01.63	10 15.228	.5695	−23 48 57.73	.790	2	2	
2312	7.8 7.8	02.71	10 27.201	.4894	−20 19 41.12	.804	2	2	
2313	8.3	01.55	10 57.124	.5093	−21 14 24.50	.841	2	2	
2314	7.3 7.5	02.73	11 7.862	.3835	−15 29 18.87	.855	2	2	
2315	7.2	01.59	11 15.310	.4534	−18 44 21.27	.863	2	2	
2316	6.0	01.59	12 8.966	.5277	−22 7 8.26	.929	3	3	*Fund.*
		02.59	8.947		8.33		8	8	
2317	7.0	01.60	13 35.717	.5065	−21 15 47.94	+11.035	2	2	
2318	5.6	01.62	13 37.457	.4659	−19 25 50.45	.038	2	2	
2319	7.7	01.63	13 46.245	.6051	−25 32 15.35	.048	2	2	Pr. Mo. (?)
2320	8.0 8.1	02.72	14 0.564	.4302	−17 48 4.11	.065	2	2	N. p.
Anon.	8.5	02.72	14 24.891	.4304	−17 48 40.64	.093	2	2	S. f.
2321	4.7	01.55	15 7.064	.3303	−13 4 25.72	.146	2	2	
2322	6.7	01.56	15 9.514	.3720	−15 6 0.73	.149	2	2	S. p.
2323	3.4	01.59	15 23.647	.3718	−15 5 50.01	.166	2	2	*Fund.*
		02.69	23.613		50.02		4	4	
2324	7.6	01.60	15 34.435	.5615	−23 47 35.68	.180	2	2	
2325	8.3	01.62	16 53.046	.4068	−16 50 21.86	.274	2	2	
2326	8.1	01.55	18 29.399	.5250	−22 22 18.39	.390	2	2	
2327	8.0 7.8	01.56	18 32.863	.3408	−13 43 6.52	.394	2	2	
2328	7.1	01.59	18 36.349	.6122	−26 9 20.81	.398	2	2	
2329	7.0	01.60	19 18.144	.4664	−19 45 27.02	.448	2	2	
2330	8.2	01.62	20 16.917	.5887	−25 16 20.78	.519	2	2	
2331	6.8	01.63	20 50.096	.4209	−17 42 13.89	.558	2	2	
2332	8.5 8.5	02.71	21 2.256	.4942	−21 8 8.88	.572	2	2	
2333	5.2	01.55	21 35.854	.4377	−18 32 22.82	.613	2	2	*Fund.* N. p. dup.
		02.53	35.837		22.66		4	4	
2334	7.8	01.56	22 28.455	.3498	−14 19 37.30	.675	2	2	
2335	6.9	01.59	22 48 651	.5627	−24 18 47.23	.699	2	2	
2336	6.0	01.60	23 5.496	.3847	−16 4 20.73	.719	2	2	
2337	6.5 6.8	01.62	23 11.466	.4935	−21 13 58.71	.726	2	2	
2338	6.5	01.63	23 39.296	.5256	−22 43 23.36	.758	2	2	
2339	7.5 7.4	02.71	23 58.396	.3204	−12 55 26.45	.781	2	2	
2340	5.6	02.67	24 9 909	.4426	−18 54 51.03	.795	2	2	N. f. 20″ dup. 6¾ : 7¼
2341	6.2	01.55	25 28.204	.3685	−15 23 25.52	.887	2	2	
2342	7.8	01.56	25 39.700	.4109	−17 28 28.67	.901	2	2	
2343	6.4	01.61	26 55.191	.5782	−25 16 53.52	.989	6	6	*Fund.*
		02.73	55.199		53.65		2	2	
2344	8.3 8.4	01.60	27 37.856	.4876	−21 14 13.54	+12.039	2	2	
		02.70	37.885		13.26		2	2	
2345	8.3 8.4	02.71	28 14.407	.5381	−23 35 28.30	.081	2	2	
2346	6.2 6.1	02.73	28 37.776	.3392	−14 3 52.56	.109	2	2	
2347	7.8 7.8	01.55	28 42.690	.4544	−19 44 21.15	.114	2	2	
		02.67	42.718		21.63		2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
2348	8.5 8.3	1901.56	20 29 42.918	3.4198	−18 7 51.29	+12.184	2	2	
		02.70	42.912		51.65		2	2	
2349	6.2	01.63	29 52.762	.3940	−16 52 9.47	.196	2	2	
2350	6.8 7.1	01.59	30 39.302	.4766	−20 55 50.76	.249	2	2	
		02.67	39.246		50.77		2	2	
2351	6.5	01.60	30 45.561	.3112	−12 43 38.56	.257	2	2	
2352	7.8	01.62	31 52.671	.5150	−22 47 29.28	.333	2	2	
2353	7.0 7.1	02.73	32 27.824	.2840	−11 22 51.78	.374	2	2	
2354	5.3	01.55	33 40.872	.3589	−15 18 19.92	.458	2	2	
2355	8.7 8.7	01.56	33 48.323	.4538	−20 1 23.25	.466	2	2	
		02.67	48.321		24.40		2	1	
2356	6.5	01.59	34 14.835	.5406	−24 8 21.25	.497	2	2	Pr. Mo. +^{s}.034 +0.″41
2357	5.3	01.62	34 21.480	.4217	−18 29 27.40	.504	5	5	*Fund.*
		02.71	21.450		27.18		4	4	
2358	6.0	01.62	34 55.388	.3808	−16 28 47.66	.543	2	2	
2359	7.7 7.4	02.73	35 40.428	.3288	−13 51 17.38	.593	2	2	
2360	8.8 8.8	01.63	36 18.345	.4837	−21 37 51.86	.636	2	2	
		02.70	18.317		51.96		2	2	
2361	7.8	01.55	37 6.704	.3197	−13 26 54.06	.692	2	2	
2362	6.7	01.56	38 5.929	.2915	−12 0 2.43	.758	2	2	
2363	7.3 7.4	01.59	38 11.739	.4414	−19 42 9.54	.765	2	2	
		02.67	11.734		10.07		2	2	
2364	7.1	01.60	38 59.717	.3390	−14 32 47.83	.819	2	2	
2365	8.0	01.63	39 9.819	.2692	−10 51 10.09	.830	3	3	
2366	6.7	01.63	39 37.977	.3694	−16 9 38.50	.861	2	2	
2367	5.8 5.8	02.71	40 22.190	.4829	−21 52 39.62	.910	2	2	
2368	7.2	01.55	40 24.549	.5293	−24 5 16.83	.913	2	2	
2369	8.0 7.5	01.56	40 55.780	.3944	−17 31 34.17	.948	2	2	
		02.67	55.790		35.32		2	2	
q	8.0 8.0	02.70	41 41.312	.4224	−18 59 11.71	.999	2	2	
2370	4.2	01.59	42 15.860	.2488	− 9 51 42.77	+13.037	2	2	(Fund.)
2371	7.4	01.60	42 31.621	.5050	−23 6 13.92	.054	2	2	Pr. Mo. ^{s}.000 −0″.19
2372	7.0	01.62	42 35.719	.3801	−16 53 15.66	.059	2	2	
2373	8.0 8.0	01.63	43 28.321	.4602	−20 59 42.80	.117	2	2	
		02.70	28.343		43.26		2	2	
2374	6.7 6.5	02.67	43 40.257	.4084	−18 24 19.25	.130	2	2	
2375	7.8	01.55	43 57.073	.2836	−11 49 30.49	.149	2	2	
2376	7.5 7.6	02.73	45 0.278	.3582	−15 52 58.13	.218	2	2	
2377	6.3	01.61	45 11.202	.3026	−12 54 55.80	.230	3	3	*Fund.*
2378	8.0 7.8	01.56	45 46.664	.3276	−14 17 47.01	.269	2	2	
2379	7.5	01.62	46 21.563	.2610	−10 41 30.27	.307	2	2	
2380	7.0 7.0	01.63	46 33.017	.4362	−20 1 6.94	.319	2	2	
		02.70	33.024		6.42		2	2	
2381	7.3 7.0	02.71	46 35.563	.4678	−21 36 23.02	.322	2	2	
2382	7.0 6.8	02.73	46 59.974	.3131	−13 34 43.11	.349	2	2	
2383	8.7 8.5	01.55	47 18.264	.3841	−17 22 54.11	.368	2	2	
2384	6.5	01.60	47 37.431	.2829	−11 57 6.09	.390	2	2	
2385	6.5 6.7	01.56	47 50.317	.4241	−19 29 28.48	.403	2	2	
		02.67	50.339		28.82		2	2	
2386	7.3	01.59	48 8.882	.5280	−24 39 28.95	.424	2	2	
2387	6.0	01.62	49 8.846	.3994	−18 18 8.89	.489	4	5	*Fund.*
		02.67	8.833		8.38		2	2	
2388	8.3 8.5	01.63	49 15.301	.4966	−23 13 54.63	.495	2	2	
2389	7.5 7.5	02.71	49 21.720	.3493	−15 39 45.37	.503	2	2	
2390	8.0 7.9	02.73	50 9.622	.3042	−13 14 56.00	.554	2	2	
2391	7.5	01.55	51 5.760	.4765	−22 23 20.83	.614	2	2	
2392	6.2	01.56	51 29.782	.2464	−10 4 51.33	.640	2	2	
2393	6.0	01.59	52 4.770	.3602	−16 24 59.05	.677	2	2	
2394	7.1	01.60	52 33.882	.2857	−12 20 25.14	.708	2	2	
2395	6.0	01.62	53 9.636	.3306	−14 52 8.96	.747	2	2	
2396	7.8	01.63	53 40.626	.4417	−20 49 54.39	.778	2	2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
2397	8.7 8.3	1902.71	20 53 48.425	3.2627	−11 6 4.26	+13.787	2 2	S. p. 6$^{\mathrm{m}}$.2
2398	6.2 6.2	02.70	53 55.249	.4143	−19 25 22.09	.794	2 2	
2399	6.3 6.5	01.55	55 14.124	.3843	−17 55 15.35	.877	2 2	
		02.67	14.107		15.09		2 2	
2400	7.6	01.56	55 36.737	.4904	−23 28 10.79	.902	2 2	
2401	7.0	01.59	55 37.736	.3110	−13 55 15.99	.903	2 2	
2402	8.8	01.60	36 22.753	.4547	−21 43 27.68	.950	2 2	
2403	7.0	01.62	56 32.608	.2778	−12 5 16.54	.960	2 2	
2404	7.2	01.63	57 0.515	.3444	−15 51 57.14	.990	2 2	
2405	6.8 6.8	02.71	57 10.923	.2477	−10 23 22.81	+14.000	2 2	
c	8.0 7.5	02.70	58 23.118	.3909	−18 30 26.44	.075	2 2	
2406	5.2	01.59	58 42.884	.4229	−20 15 1.56	.096	2 2	(Fund.)
2407	4.3	01.57	21 0 19.597	.3722	−17 37 48.97	.196	6 6	*Fund.*
		02.74	19.608		49.15		8 8	
2408	8.2	01.62	0 26.313	.2558	−11 0 38.47	.202	2 2	
2409	7.2	01.63	1 37.116	.3119	−14 19 23.03	.275	2 2	
2410	7.0 6.8	01.59	1 49.939	.4041	−19 29 18.21	.288	2 2	
		02.70	49.909		17.37		2 2	
2411	7.8 7.7	02.71	2 10.197	.4646	−22 44 13.17	.309	2 2	
2412	8.2 8.0	02.73	2 46.609	.2927	−13 17 1.08	.346	2 2	
2413	5.3	02.75	2 50.023	.4418	−21 35 44.66	.349	2 2	*Fund.*
2414	6.2 6.2	02.75	3 50.041	.4282	−20 57 29.50	.410	2 2	Pr. Mo. +$^{\mathrm{s}}$.007 −0″.13
2415	4.6	01.58	4 8.867	.2658	−11 46 36.02	.429	6 6	*Fund.*
2416	7.2 7.5	02.67	4 34.902	.3460	−16 6 27.69	.456	2 2	
2417	8.3 8.3	01.59	4 46.944	.3616	−17 21 51.28	.468	2 2	
		02.70	46.961		50.79		2 2	
2418	7.9	01.60	4 52.911	.4785	−23 42 56.53	.474	2 2	
2419	8.0 7.9	01.63	4 54.451	.3860	−18 44 13.77	.476	2 2	
		02.77	54.441		13.78		2 2	
2420	8.0 8.0	02.71	5 20.193	.2453	−10 36 59.94	.501	2 2	
2421	6.7 6.5	02.73	5 23.452	.2310	− 9 45 35.33	.504	2 2	
2422	6.3 6.4	02.75	6 9.951	.3166	−14 52 52.42	.552	2 2	
2423	7.3	01.59	8 16.783	.4127	−20 30 1.97	.678	2 2	
2424	7.0	01.60	8 17.109	.4517	−22 37 28.01	.678	2 2	
2425	7.5	01.62	8 39.862	.2801	−12 52 45.18	.701	2 2	
2426	6.5	01.63	8 52.149	.2491	−11 1 6.36	.713	2 2	
2427	6.4 6.5	02.67	9 30.976	.3622	−17 45 31.90	.752	2 2	
2428	5.5 5 5	02.71	9 56.467	.4202	−21 3 59.70	.776	2 2	
2429	8.3 8.3	02.73	10 1.552	.3398	−16 30 21.15	.782	2 2	
2430	5.5 5.0	02.75	10 12.768	.3239	−15 35 14.62	.793	2 2	
2431	6.5 6.5	02.75	10 31.011	.2905	−13 37 0.67	.811	2 2	
2432	7.0	01.62	10 55.707	.2249	− 9 37 52.45	.835	2 2	
2433	5.4	01.59	12 20.857	.3694	−18 24 14.99	.918	2 2	
2434	8.3	01.60	12 34.139	.3813	−19 6 22.19	.931	2 2	
2435	6.8	01.63	12 46.022	.4100	−20 45 15.85	.942	2 2	
2436	8.2 8.0	02.71	13 5.831	.2779	−13 0 54.80	.962	2 2	
2437	6.8 6.9	02.73	13 41.775	.3367	−16 35 58.52	.997	2 2	
2438	6.7 6.7	02.75	14 19.013	.3000	−14 26 22.02	+15.033	2 2	
2439	8.0	01.59	15 23.850	.2556	−11 46 23.92	.095	2 2	
2440	8.5	01.60	15 44.790	.3911	−19 57 7.88	.115	2 2	
2441	8.0	01.62	15 58.496	.3169	−15 34 47.52	.128	2 2	
2442	8.2 8.0	02.77	16 36.931	.1943	− 7 56 45.81	.165	2 2	
2443	4.4	01.63	16 40.782	.3438	−17 15 37.21	.168	2 2	*Fund.*
		02.71	40.795		37.33		8 8	
2444	6.4 6.0	02.73	17 34.611	.2217	− 9 44 44.06	.220	2 2	
2445	5.6 5.5	02.75	18 29.407	.4095	−21 16 37.32	.271	2 2	Pr. Mo. −$^{\mathrm{s}}$.003 −0″.12
2446	5.4	01.59	18 43.689	.2769	−13 18 26.04	.285	2 2	*Fund.*
2447	8.8 8.8	02.77	19 38.007	.3327	−16 49 56.22	.336	2 2	
2448	5.7 5.9	02.75	19 50.674	.2266	−10 10 28.47	.348	2 2	Pr. Mo. $^{\mathrm{s}}$.000 −0″.17
2449	7.2	01.63	19 55.545	.2978	−14 42 28.79	.352	2 2	

No	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
2450	8.8 8.5	1901.60	21 20 41.261	3.3601	−18 34 51.92	+15.395	2 2	
2451	7.8 7.5	02.73	20 56.568	.3123	−15 40 40.13	.409	2 2	
2452	8.2 8.2	02.71	21 2.559	.2438	−11 20 58.17	.415	2 2	
2453	7.5	01.62	21 26.180	.3741	−19 29 25.31	.437	2 2	
2454	6.0 5.9	02.75	21 34.710	.4102	−21 37 44.19	.445	2 2	
2455	7.6	01.59	21 50.801	.3929	−20 38 39.52	.460	2 2	Pr. Mo. ^{s}.000 −0″.12
2456	7.5 7.4	02.75	22 5.187	.1834	−7 26 50.56	.473	2 1	
2457	7.3	01.60	22 13.287	.2544	−12 5 57.71	.481	2 2	Pr. Mo. (?)
2458	4.5	01.63	23 1.356	.4181	−22 14 34.62	.525	2 2	
2459	8.8	01.64	23 56.744	.2698	−13 12 30.06	.577	2 2	
2460	7.0 7.0	02.71	24 11.669	.2891	−14 27 44.01	.590	2 2	
2461	6.5 6.5	02.73	24 22.914	.3709	−19 35 2.72	.600	2 2	
2462	8.8 8.8	02.75	24 38.039	.2057	−9 2 22.00	.614	2 2	
2463	8.3	01.59	25 41.772	.3383	−17 41 55.80	.672	2 2	
2464	7.0	01.60	26 13.429	.2216	−10 10 53.77	.701	2 2	
2465	7.0	01.62	26 56.413	.2590	−12 42 30.75	.740	2 2	
2466	8.8	01.64	27 11.645	.2924	−14 54 33.15	.754	2 2	
2467	7.2 7.2	02.71	28 8.804	.3181	−16 38 27.35	.805	2 2	Pr. Mo. +^{s}.003 −0″.15
2468	5.9 6.0	02.73	29 14.107	.3783	−20 31 48.51	.864	2 2	
2469	8.0 7.8	02.75	29 22.601	.2094	−9 31 52.37	.871	2 2	
2470	7.8	01.59	30 48.170	.3487	−18 50 20.97	.947	2 2	
2471	8.0	01.60	31 16.822	.2723	−13 54 22.07	.972	2 2	
2472	4.5 5.0	02.75	31 28.948	.3646	−19 54 50.88	.983	2 2	
2473	7.3	01.63	31 32.926	.2236	−10 37 20.03	.987	2 2	
2474	7.7 7.3	02.71	31 56.262	.2420	−11 54 32.45	+16.007	2 2	
2475	4.8	01.62	32 25.734	.1894	−8 18 9.77	.033	2 2	*Fund.*
		02.73	25.787		9.72		2 2	
2476	7.2 7.2	02.75	32 45.111	.2923	−15 21 37.95	.050	2 2	
2477	7.5 7.3	02.75	33 29.560	.3972	−22 9 53.54	.088	2 2	
2478	6.3 6.3	02.77	34 5.716	.2272	−11 1 37.91	.120	2 2	
2479	8.3	01.59	34 13.173	.2567	−13 4 30.45	.126	2 2	
2480	3.8	01.63	34 33.071	.3163	−17 6 50.20	.143	2 2	*Fund.*
		02.75	33.120		50.92		6 6	
2481	8.0	01.60	35 37.448	.2054	−9 35 45.10	.198	2 2	
2482	5.3	01.62	36 6.665	.2753	−14 29 37.48	.224	2 2	Pr. Mo. −^{s}.011 −0″.31
2483	8.0 8.0	02.71	36 36.022	.2488	−12 42 18.52	.249	2 2	
2484	4.7	02.71	37 4.566	.3460	−19 19 19.60	.273	6 6	*Fund.*
2485	8.5 8.5	02.75	37 23.208	.3693	−20 52 4.35	.289	2 2	S. p. dup.
2486	5.8 5.8	02.75	37 37.121	.2787	−14 51 25.03	.301	2 2	
2487	6.2 6.2	02.73	37 37.958	.3566	−20 4 38.62	.302	2 2	
2488	8.2	01.59	38 0.774	.3222	−17 50 38.38	.321	2 2	
2489	8.2	01.63	38 7.329	.1795	−7 51 55.70	.326	2 2	
2490	5.8	01.60	38 33.407	.2826	−15 12 27.36	.348	2 2	
2491	8.8	01.62	39 31.099	.2172	−10 40 19.16	.397	2 2	
2492	5.2 5.2	02.71	39 40.371	.2015	−9 32 30.60	.405	2 2	
2493	6.2 6.0	02.73	40 56.293	.2031	−9 44 13.91	.468	2 2	
2494	5.4 5.6	02.75	41 9.175	.2317	−11 49 36.31	.479	2 2	
2495	3.0	01.61	41 31.367	.2984	−16 34 51.94	.497	5 5	*Fund.*
		02.75	31.388		52.61		8 8	
2496	7.7 7.5	02.75	42 12.510	.3279	−18 40 34.57	.531	2 2	
2497	6.2	01.62	42 22.382	.1568	−6 22 49.16	.539	2 2	
2498	8.5	01.63	43 6.732	.2686	−14 37 45.50	.576	2 2	
2499	7.5 8.0	02.71	43 45.081	.2811	−15 35 8.26	.607	2 2	
2500	6.5 6.5	02.73	44 16.821	.2471	−13 11 20.78	.633	2 2	
2501	6.7 6.6	02.75	44 43.096	.3042	−17 18 40.03	.655	2 2	
2502	8.2	01.59	44 49.137	.2277	−11 48 33.69	.659	2 2	
2503	8.0	01.60	45 15.686	.3570	−21 0 28.04	.681	2 2	
2504	7.0	01.64	45 15.852	.1957	−9 26 54.45	.681	2 2	
2505	7.8	01.62	45 45.156	.1811	−8 22 32.03	.705	2 2	
2506	6.6 6.6	02.75	46 8.689	.3274	−19 5 21.82	.723	2 2	Pr. Mo. (?)

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
2507	8.8 8.8	1902.71	21 47 5.426	3.2924	−16 43 40.40	+16.770	2 2	
2508	8.0 7.9	02.73	47 11.695	.3036	−17 32 8.75	.774	2 2	
2509	5.2 5.1	02.75	47 50.807	.2543	−14 1 21.36	.806	2 2	(Fund.)
2510	7.5	01.59	47 55.939	.2628	−14 39 36.87	.810	2 2	
2511	6.5	01.60	48 15.215	.2107	−10 46 56.73	.825	2 2	
2512	8.0	01.62	49 38.962	.2312	−12 26 34.91	.891	2 2	
2513	7.3	01.63	50 57.561	.1657	− 7 27 15.23	.953	2 2	
2514	8.3	01.59	51 5.310	.1988	−10 3 37.02	.958	2 2	
2515	6.8	01.60	51 15.605	.3088	−18 22 19.18	.967	2 2	
2516	8.0 7.8	02.71	51 32.659	.3262	−19 39 54.27	.980	2 2	
2517	6.8 7.0	02.73	52 20.946	.2696	−15 35 55.37	+17.017	2 2	
2518	7.5 7.3	02.75	52 21.200	.1847	− 9 2 25.63	.017	2 2	
2519	8.3	01.62	52 55.081	.2294	−12 34 43.01	.043	2 2	
2520	6.2	01.63	52 58.779	.1450	− 5 53 55.98	.046	2 2	Pr. Mo. $-^{s}.003$ $-0''.12$
2521	7.5	01.59	54 25.107	.2050	−10 47 24.61	.112	2 2	
2522	7.2 7.1	02.73	55 41.778	.2380	−13 30 16.37	.170	2 2	
2523	8.6 8.5	02.75	55 50.809	.2166	−11 49 24.75	.177	2 2	
2524	7.9	01.60	56 2.079	.2542	−14 48 22.22	.185	2 2	
2525	7.0	01.62	56 6.080	.2708	−16 5 33.22	.188	2 2	
2526	8.0	01.63	56 31.005	.1976	−10 21 22.13	.207	2 2	
2527	6.4 6.5	02.71	56 41.636	.3000	−18 23 0.42	.214	2 2	
2528	5.6	01.60	58 0.931	.1557	− 7 0 20.42	.274	2 2	
2529	8.3	01.61	58 15.823	.1668	− 7 56 33.09	.284	2 2	
2530	7.2 7.4	02.75	58 43.091	.2344	−13 30 12.43	.305	2 2	
2531	8.0 8.0	02.75	58 45.445	.2740	−16 38 47.71	.307	2 2	
2532	7.3 7.1	02.73	59 13.710	.1812	− 9 11 59.95	.327	2 2	
2533	8.0	01.63	59 21.770	.1349	− 5 19 28.34	.333	2 2	
2534	6.8	01.84	22 0 46.726	.2551	−15 22 57.91	.394	2 2	Pr. Mo. (?)
2535	4.3	01.61	1 2.260	.2420	−14 21 17.41	.406	4 4	*Fund.*
		02.80	2.250		17.77		4 4	
2536	7.3 7.5	02.84	1 54.894	.3128	−20 3 24.81	.444	2 2	
2537	6.8 6.5	02.75	1 58.505	.1995	−10 56 5.14	.446	2 2	
2538	7.8 7.6	02.75	2 27.286	.1449	− 6 19 1.41	.467	2 2	
2539	7.8 7.9	02.89	2 45.967	.2890	−18 19 19.63	.481	2 2	
2540	7.0 7.0	02.73	2 59.342	.2724	−17 1 56.20	.490	2 2	
2541	7.8 7.5	02.79	3 13.189	.2121	−12 6 8.53	.500	3 3	
2542	5.8 6.0	02.90	3 29.979	.2965	−19 0 33.44	.512	2 2	
2543	8.5	01.84	4 13.061	.1781	− 9 17 26.95	.543	2 2	
2544	6.5 6.3	02.71	4 13.298	.1636	− 8 1 36.15	.543	2 2	Pr. Mo. $+^{s}.005$ $-0''.48$
2545	8.7 9.0	02.85	4 24.072	.2528	−15 36 46.06	.550	1 1	
2546	6.5 6.5	02.75	5 11.792	.2007	−11 18 45.35	.584	2 2	
2547	5.4 5.5	02.77	5 16.766	.2093	−12 3 24.65	.588	2 2	
2548	6.0 6.0	02.75	5 20.993	.1257	− 4 45 31.33	.590	2 2	
2549	6.5 6.5	02.73	7 2.255	.2381	−14 41 10.76	.660	2 2	
2550	8.5 8.5	02.89	7 5.483	.2841	−18 31 16.18	.663	2 2	
2551	8.3 8.5	02.90	7 19.522	.1940	−10 55 11.99	.673	2 2	
2552	7.4	01.84	7 27.462	.1493	− 6 57 48.62	.678	2 2	
2553	6.3 6.4	02.71	7 31.458	.1298	− 5 12 49.36	.680	2 2	
2554	8.5 8.5	02.85	7 39.017	.2236	−13 31 8.29	.686	2 2	
2555	6.5 6.7	02.75	8 51.455	.2959	−19 44 35.77	.736	2 2	
2556	6.5 6.6	02.75	9 13.400	.2540	−16 18 18.21	.750	2 2	Pr. Mo. $+^{s}.001$ $-0''.40$
2557	8.3 8.5	02.90	10 50.323	.2679	−17 42 11.01	.815	2 2	
2558	7.5 7.4	02.73	11 25.174	.2036	−12 8 48.04	.839	2 2	
2559	5.7 5.6	02.89	11 26.832	.2168	−13 19 48.94	.840	2 2	
2560	7.2 7.5	02.77	11 33.040	.2373	−15 9 18.75	.844	2 2	
2561	4.3	01.74	11 33.491	.1610	− 8 16 52.85	.844	4 4	*Fund.*
2562	6.2 6.0	02.71	11 35.827	.1746	− 9 32 17.64	.846	2 2	
2563	5.9 6.0	02.75	11 53.313	.1350	− 5 53 11.55	.857	2 2	
2564	8.0 8.2	02.85	12 5.540	.2771	−18 39 41.93	.865	2 2	
2565	8.3 8.3	02.83	12 31.887	.1815	−10 14 26.94	.883	2 2	

No.	Mag.	Epoch.	R.A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
2566	6.3 6.3	1902.77	22 13 38.777	3.2193	−13 48 19.88	+17.927	2 2	
2567	7.5 7.5	02.85	14 9.049	.2567	−17 12 13.48	.947	2 2	
2568	7.8	01.84	14 37.446	.1197	− 4 34 2.71	.965	2 2	
2569	8.2 8.0	02.71	14 55.860	.2059	−12 43 25.31	.977	2 2	
2570	5.4 5.9	02.89	14 56.203	.1589	− 8 19 23 68	.977	2 2	
2571	7.2 7.1	02.73	15 34.759	.1683	− 9 16 3.29	+18.002	2 2	
2572	7.5 7.5	02.75	16 9.852	.1415	− 6 44 46.75	.024	2 2	S. p. pair.
2573	7.8 7.5	02.75	16 53.327	.1890	−11 21 6.66	.052	2 2	
2574	8.0	01.84	17 26.262	.1152	− 4 14 28.58	.073	2 2	Pr. Mo. (?)
2575	7.0 7.2	02.90	17 58.139	.2314	−15 27 6.52	.093	3 3	Pr. Mo. (?)
2576	6.1 6.0	02.71	18 17.474	.1499	− 7 42 0.59	.105	2 2	
2577	7.0 7.0	02.73	18 50.278	.1803	−10 42 11.66	.125	2 2	
2578	6.0	02.79	19 5.733	.2147	−14 2 10.57	.135	8 8	*Fund.*
2579	8 0 8.0	02.85	19 8.522	.2584	−18 5 58.49	.136	2 2	
2580	8.0 7.8	02.90	20 54.128	.1281	− 5 41 9.14	.202	3 3	
2581	7.2 7.2	02.77	21 4.384	.1045	− 3 17 42.38	.208	2 2	Pr. Mo. (?)
2582	7.0	01.84	21 23.008	.1881	−11 44 11.85	.219	2 2	
2583	8.3 8.3	02.71	21 30.412	.1893	−11 51 29.20	.223	2 2	
2584	7.8 7.8	02.85	21 31.332	.1607	− 9 1 10.92	.224	2 2	
2585	8.0 7.8	02.75	22 38.410	.1343	− 6 24 56.54	.264	2 2	
2586	8.3 8.4	02.73	23 30.360	.2358	−16 39 45.74	.295	2 2	
2587	8.5 8.4	02.75	24 1.871	.1699	−10 10 26.56	.315	2 2	
2588	8.8 8.3	02.77	24 12.183	.1169	− 4 41 58.19	.321	2 2	
2589	7.0	01.84	24 40.721	.2012	−13 25 37.63	.338	2 2	
2590	6.8 6.8	02.71	24 55.873	.2176	−15 5 49.02	.347	2 2	
2591	7.8 7.8	02.85	25 15.245	.1224	− 5 19 49.90	.358	2 2	
2592	7.3 7.5	02.89	25 17.488	.1538	− 8 37 38.30	.359	2 2	
2593	4.8	02.83	25 21.370	.1784	−11 11 23.15	.362	5 5	*Fund.*
2594	6.2 6.5	02.75	26 3.726	.1384	− 7 3 55.47	.387	2 2	
2595	6.3 6.3	02.75	26 8.292	.1042	− 3 25 24.92	.389	2 2	
2596	6.8	01.84	28 50.581	.1648	−10 7 27.52	.482	2 2	
2597	8.5 8.4	02.71	29 5.685	.2168	−15 38 2.99	.491	2 2	N. p.
2598	8.3 8.0	02.73	30 10.778	.0971	− 2 46 25.55	.527	2 2	
2599	7.0 7.0	02.75	30 44.295	.2266	−16 54 18.39	.545	2 2	
2600	7.7 7.5	02.75	31 48.031	.1813	−12 14 57.19	.580	2 2	
2601	7.8 7.8	02.85	32 5.350	.1301	− 6 35 7.99	.590	2 2	
2602	8.5	01.84	32 34.339	.1953	−13 53 22.16	.605	2 2	
2603	5.5	02.81	32 34.667	.1136	− 4 44 38.31	.606	8 8	*Fund.*
2604	6.8 6.4	02.89	33 7.458	.1455	− 8 25 2.57	.624	2 2	
2605	7.9 7.8	02.73	33 14.625	.2009	−14 35 13.14	.628	2 2	S. f. 5^s
2606	6.9 6.9	02.75	34 0.383	.1635	−10 32 53.28	.652	2 2	
2607	7.2	01.84	36 7.902	.1806	−12 45 7.11	.719	2 2	
2608	6.7 6.7	02.71	36 53.883	.1190	− 5 37 24.37	.743	2 2	
2609	8.5 8.3	02.73	37 44.945	.1524	− 9 40 37.21	.769	2 2	
2610	8.2 8.2	02.79	37 47.913	.0986	− 3 12 22.34	.772	3 2	
2611	6.2	02.83	38 0.972	.1338	− 7 29 11.44	.778	4 3	*Fund.*
2612	8.0 8.0	02.81	38 11.175	.2121	−16 39 39.79	.783	2 2	
2613	7.0 7.0	02.85	39 2.070	.1980	−15 12 2.76	.809	2 2	
2614	8.2 8.1	01.84	40 9.050	.1821	−13 31 54.28	.842	2 2	
2615	8.3 8.3	02.73	40 50.750	.1690	−12 3 53.28	.863	2 2	
2616	7.2 7.1	02.77	40 58.118	.1658	−11 41 30.41	.867	2 3	
2617	7.5 7.5	02.75	42 2.442	.0975	− 3 14 8.30	.898	2 2	
2618	8.1 7.8	02.75	42 9.340	.1290	− 7 15 27.09	.901	2 2	
2619	7.0 7.1	02.79	42 20.841	.0903	− 2 18 56.44	.907	3 3	
2620	5.6 5.7	02.85	42 24.294	.1878	−14 35 1.48	.909	2 2	
2621	8.5 8.3	02.89	43 6.000	.1209	− 6 17 43.96	.929	2 2	
2622	8.0 7.5	02.91	43 8.961	.1392	− 8 38 24.68	.930	2 2	
2623	6.3	01.84	43 14.515	.1584	−11 5 1.93	.933	2 2	
2624	8.2 8.2	02.71	43 19.647	.1115	− 5 6 12.24	.935	2 2	
2625	4.1	02.73	44 17.900	.1814	−14 7 13.56	.963	2 2	*Fund.*

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.	Notes.
			h m s	s	° ′ ″	″		
2626	8.3 8.0	1902.75	22 45 16.983	3.1729	−13 13 12.92	+18.991	2 2	
2627	7.5 7.5	02.75	45 34.461	.0806	− 1 6 27.38	.998	2 2	
2628	8.2 8.1	02.81	45 58.019	.1460	− 9 51 16.92	+19.010	2 2	
2629	3.8	01.84	47 23.864	.1317	− 8 6 42.10	.049	2 2	*Fund.*
		02.78	23.887		42.26		8 8	
2630	6.8 6.8	02.71	47 30.193	.1501	−10 35 24.68	.052	2 2	Pr. Mo. +^{s}.017 −0″.01
2631	7.8 7.6	02.73	47 30.524	.0953	− 3 9 25.56	.053	2 2	
2632	5.8 6.0	02.91	48 12.876	.1610	−12 8 54.23	.072	2 2	
2633	7.0 7.0	02.75	48 16.308	.1194	− 6 31 6.61	.073	2 2	
2634	7.0 7.0	02.75	48 50.701	.1645	−12 43 17.38	.088	2 2	
2635	7.5 7.7	02.81	49 9.758	.0836	− 1 34 49.27	.097	2 2	
2636	6.3 6.3	02.85	49 21.751	.1274	− 7 44 10.70	.102	2 2	
2637	8.2	01.84	50 53.171	.1720	−14 5 18.58	.143	2 2	
2638	8.0 8.0	02.71	51 12.520	.1821	−15 31 23.36	.150	2 2	
2639	8.1 8 1	02 73	51 34.834	.1473	−10 47 47.30	.160	2 2	
2640	7.0 6.8	02.75	51 57.027	.0982	− 3 46 47.61	.170	2 2	N. p. wide dup.
2641	6.5 6.5	02.75	52 6.648	.1088	− 5 20 40.24	.174	2 2	B. J. 303.
2642	8.7 8.7	02.81	52 52.196	.1520	−11 40 0.59	.193	2 2	
2643	8.5 8.5	02.85	52 57.946	.1143	− 6 13 15.44	.195	2 2	
2644	6.3 6.5	02.89	53 6.462	.0920	− 2 55 48.54	.199	2 2	
2645	8.5	01.84	53 46.828	.1309	− 8 44 56.74	.216	2 2	
2646	6.5 6.5	02.71	54 19.729	.1638	−13 36 24.61	.229	2 2	
2647	7.0 7.0	02.73	55 6.619	.1342	− 9 24 58.12	.248	2 2	
2648	6.5	01.86	55 30.240	.0746	− 0 21 4.04	.258	4 4	*Fund.*
		02.77	30.253		4.28		3 3	
2649	7.6 7.7	02.75	55 54.591	.1380	−10 5 18.55	.268	2 2	
2650	7.5 7.1	02.81	56 8.086	.1695	−14 48 26.90	.273	2 2	S. f. 38^{s}
2651	6.0 6.5	02.85	56 21.234	.1060	− 5 14 56.96	.279	2 2	
2652	7.8 7.4	02.89	56 46.286	.0928	− 3 13 23.20	.288	2 2	
2653	8.0 7.8	02.91	57 17.890	.1478	−11 48 11.27	.301	2 2	
2654	6.8	01.84	57 21.086	.1174	− 7 6 39.42	.302	2 2	
2655	7.7 7.7	02.71	58 1.046	.0783	− 0 57 47.39	.318	2 2	Pr. Mo. −^{s}.005 −0″.16
2656	7.0	01.85	58 44.796	.1053	− 5 20 4.65	.335	2 2	Pr. Mo. (?)
β Pisc.	4.6	02.69	58 47.258	.0521	+ 3 16 54.30	.336	4 4	*Fund.*
2657	8.8 8.8	01.87	59 9.516	.0873	− 2 26 21.32	.345	2 2	
2658	8.5 8.0	02.73	59 15.487	.1514	−12 43 4.09	.347	2 2	
2659	5.5 5 5	02.81	59 56.958	.1224	− 8 14 0.77	.363	2 2	B. J. 303
2660	7.2 7.0	02.85	23 0 10.688	.0677	+ 0 46 5.19	.368	2 2	
2661	7.3	01.84	0 40.054	.1387	−10 58 38.37	.379	2 2	
2662	8.3	01.85	1 44.234	.1516	−13 16 4.90	.402	2 2	
2663	8.0 7.6	02.75	2 4.543	.1274	− 9 21 17.16	.410	2 2	
2664	7.8 7.8	01.87	2 10.309	.1454	−12 20 49.99	.412	2 2	
2665	7.2 7.1	02.79	2 38.086	.0772	− 0 50 12.86	.422	2 2	
2666	8.7 8.5	02.89	2 39.931	.1085	− 6 14 19.05	.423	2 2	
2667	6.0	02.86	3 33.642	.0633	+ 1 35 0.56	.442	7 7	*Fund.*
2668	8.0 8.0	02.85	3 55.205	.0893	− 2 59 40.55	.449	2 2	
2669	8.5	01.84	4 27.204	.0976	− 4 30 15.07	.461	2 2	
2670	7.5 7.0	01.85	5 5.574	.1525	−14 11 16.23	.474	2 2	
2671	7.7 7.5	01.87	5 12.165	.1188	− 8 21 3.14	.476	2 2	
2672	7.0 7.0	02.75	5 28.912	.1082	− 6 30 10.63	.482	2 2	
2673	8.6 8.6	02.79	6 16.100	.1330	−11 3 5.67	.498	2 2	
2674	8.8 8.8	02.81	6 33.416	.0814	− 1 40 39.46	.504	2 2	
2675	6.9 7.5	02.85	6 46.037	.1404	−12 28 35.95	.508	2 2	S. f. dup.
2676	7.0 7.1	02.89	7 46.008	.1262	−10 6 50.82	.528	2 2	
2677	7.7 7.6	02.91	7 52.879	.0750	− 0 30 46.81	.531	2 2	
2678	7.1	01.85	8 57.739	.0887	− 3 10 44.05	.552	2 2	
2679	4.2	01.84	9 8.614	.1063	− 6 35 17.63	.555	2 2	*Fund.*
		02.77	8.627		18.26		6 6	
2680	6.3	01.87	9 27.509	.1304	−11 13 57.76	.561	2 2	
2681	7.7 7.7	02.75	10 8.012	.1342	−12 6 35.48	.574	2 2	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Obs.		Notes.
			h m s	s	° ′ ″	″			
2682	8.2 8.1	1902.79	23 10 10.561	3.0980	− 5 4 42.06	+19.575	2	2	
2683	5.6 5.7	02.81	10 25.220	.0926	− 4 2 29.19	.580	2	2	
2684	7.7 7.5	02.85	10 32.159	.0685	+ 0 45 50.92	.582	2	2	Pr. Mo. +^{s}.011 −0$''$.06
2685	7.2 7.2	02.89	10 38.290	.1422	−13 43 44.34	.584	2	2	
2686	4.5 5.0	02.93	10 39.212	.1208	− 9 37 57.71	.584	2	2	(Fund.)
2687	7.0 7.0	02.91	10 50.021	.0821	− 1 58 9.04	.587	2	2	
2688	5.2	01.84	11 39.933	.1130	− 8 16 19.10	.603	2	2	
2689	3.8	01.85	11 58.973	.0591	+ 2 44 9.49	.608	2	2	*Fund.*
2690	6.3	01.87	12 26.918	.1322	−12 15 33.73	.617	2	2	
2691	4.5	02.75	12 42.428	.1193	− 9 43 42.87	.621	2	2	
2692	8.7 8.5	02.79	13 13.089	.0724	− 0 1 18.48	.631	2	2	N. p. 6^s.7
2693	8.5 8.5	02.81	13 18.779	.0839	− 2 26 33.33	.632	2	2	S. f. 10^s
2694	5.1	02.86	13 45.618	.1203	−10 9 27.03	.640	3	3	*Fund.*
2695	7.2 7.4	02.89	13 49.161	.1327	−12 43 3.11	.641	2	2	
2696	5.7 5.7	02.67	14 12.962	.0987	− 5 40 15.34	.648	2	2	Pr. Mo. +^{s}.011 0$''$.00
2697	6.5 6.5	01.85	15 4.831	.0926	− 4 27 49.08	.663	2	2	Pr. Mo. +^{s}.019 −0$''$.14
		02.70	4.886		49.11		2	2	
2698	6.5 6.0	01.87	15 31.625	.1015	− 6 27 14.42	.671	2	2	
		02.95	31.526		14.96		2	2	
2699	7.8 7.8	02.75	15 40.511	.1227	−11 4 47.47	.673	2	2	
2700	7.5 7.3	02.79	16 0.563	.1137	− 9 13 18.86	.679	2	2	
2702	8.0 7.9	02.77	16 4.345	.1062	− 7 34 14.85	.680	3	3	
2701	8.0 8.0	02.91	16 4.862	.0650	+ 1 39 1.55	.680	2	2	
2704	7.8 7.8	02.89	16 38.830	.1303	−12 59 49.76	.689	2	2	
2703	7.5 7.5	02.86	16 39.350	.1180	−10 18 33.85	.689	3	3	
2705	7.8 7.8	02.92	17 46.761	.0626	+ 2 16 12.63	.708	2	2	
2706	8.0	01.84	17 50.024	.1213	−11 19 11.62	.708	2	2	Pr. Mo. +^{s}.030 +0$''$.18
2707	8.0	01.85	18 6.125	.1149	− 9 56 1.26	.713	2	2	
2708	8.3 8.4	02.91	18 14.342	.0883	− 3 45 48.33	.715	2	2	
2709	6.7	01.87	18 24.147	.0734	− 0 15 28.17	.717	2	2	
2710	8.4 8.3	02.75	18 36.007	.0783	− 1 25 52.56	.720	2	2	
2711	7.8 7.8	02.79	18 54.961	.1063	− 8 5 59.19	.725	2	2	
2712	7.7 7.4	02.81	19 10.502	.0592	+ 3 10 2.84	.730	2	2	N. f. dup. 6"
f	8.9 8.5	02.70	19 38.589	.0953	− 5 35 42.67	.737	2	2	
2713	7.0 7.2	01.84	21 24.143	.1005	− 7 9 25.55	.763	2	2	
		02.67	24.115		25.68		2	2	
2714	8.3	01.85	21 25.039	.1142	−10 35 3.25	.763	2	2	
2715	8.2 8.2	02.81	21 29.530	.0950	− 5 46 57.51	.765	3	4	
2716	8.0 7.5	02.92	21 37.158	.0648	+ 1 55 40.26	.766	2	2	
2717	5.0	01.87	21 48.388	.0696	+ 0 42 29.18	.769	2	2	*Fund.*
		02.81	48.407		29.46		6	6	
2718	7.3 7.4	02.81	22 5.242	.0846	− 3 11 5.61	.773	2	2	
2719	6.3 6.5	02.87	22 53.040	.1181	−11 59 59.37	.784	2	2	
2720	8.0 8.2	02.89	23 46.670	.1017	− 7 57 8.91	.797	2	2	
2721	7.0 6.8	02.92	23 50.336	.1087	− 9 48 59.01	.798	2	2	
2722	6.5 6.5	02.91	24 19.036	.0808	− 2 20 29.65	.804	2	2	
2723	6.3 6.4	01.84	24 21.912	.0907	− 5 4 39.36	.805	2	2	Pr. Mo. +^{s}.014 −0$''$.25
		02.67	21.931		39.88		2	2	
2724	6.5	01.85	24 22.642	.0781	− 1 35 10.29	.805	2	2	
2725	7.7	01.87	25 33.444	.0712	+ 0 19 34 61	.821	2	2	
2726	6.8 6.5	02.70	25 51.719	.0961	− 6 50 19.88	.825	2	2	
2727	8.0 7.8	02.75	25 59.402	.0661	+ 1 48 47.63	.827	2	2	
2728	8.5 8.5	02.81	26 36.019	.1026	− 8 52 48.12	.834	2	2	
2729	7.0 6.8	02.87	27 15 044	.1112	−11 33 3.35	.842	2	2	
2730	6.8	01.84	27 47.020	.0840	− 3 34 6.86	.849	2	2	
2731	8.3 7.6	01.85	27 48.121	.0631	+ 2 49 46.32	.849	2	2	
2732	7.2 7.1	02.67	28 19.644	.0883	− 4 57 13.12	.856	2	2	
2733	7.7	01.87	28 33.353	.0813	− 2 47 47.06	.859	2	2	
2734	5.9 6.1	02.79	29 0.557	.0780	− 1 47 59.14	.864	3	2	
2735	8.0 7.5	02.79	29 18.556	.0570	+ 4 55 5.16	.867	2	2	

No.	Mag.		Epoch.	R. A. 1900.0.			Precess.	Decl. 1900.0.			Precess.	Obs.		Notes.
				h	m	s	s	°	′	″	″			
2736	7.3	7.3	1902.81	23	30	17.208	3.1063	-11	6	28.06	+19.879	2	2	
2737	7.2	7.0	02.87		30	21.791	.0700	+0	45	39.63	.880	2	2	
2738	6.5		02.92		30	22.612	.0966	-8	1	4.47	.880	3	3	*Fund.*
2739	8.8	8.8	02.89		30	37.888	.0912	-6	18	6.36	.882	2	2	
2740	7.4		01.84		30	50.606	.1002	-9	19	6.47	.885	2	2	
2741	8.0	7.9	01.85		30	59.163	.0647	+2	35	58.52	.887	2	2	
2742	5.6	6.0	02.92		31	17.093	.0678	+1	32	50.23	.890	2	2	
2743	8.5		01.87		33	2.206	.0842	-4	18	47.00	.908	2	2	
2744	7.2	7.1	02.75		33	2.632	.0977	-9	10	51.05	.908	2	2	
2745	8.8	8.6	02.93		34	37.131	.0757	-1	17	39.32	.924	3	3	N. p. 14^{s}.7
2746	7.3		01.85		34	42.053	.0881	-6	6	1.72	.925	2	2	
2747	4.2		02.79		34	48.489	.0593	+5	5	2.57	.926	2	2	*Fund.*
2748	8.2	7.6	02.81		35	11.727	.0616	+4	15	6.91	.929	2	2	
2749	7.5	7.4	02.87		35	33.454	.0727	-0	8	16.13	.933	2	2	
2750	7.0	7.2	02.89		35	39.170	.0934	-8	28	3.13	.934	2	2	
2751	8.7	8.7	02.92		35	44.383	.0647	+3	4	22.64	.935	2	2	
2752	8.2	8.2	01.87		36	1.318	.0896	-7	1	54.60	.937	2	2	
2753	8.7	8.4	02.75		36	5.582	.0805	-3	24	47.70	.938	2	2	
2754	4.7		01.84		36	56.616	.0695	+1	13	46.68	.946	2	2	*Fund.*
			02.74			56.587				46.62		5	5	
2755	8.3	8.0	02.89		37	13.728	.0771	-2	3	17.92	.948	2	2	
2756	7.0		01.85		39	24.534	.0801	-3	43	47.89	.966	2	2	
2757	8.7	8.5	01.87		39	26.449	.0840	-5	33	44.68	.966	2	2	
2758	8.6	8.3	02.75		39	38.858	.0879	-7	29	28.74	.968	2	2	
2759	7.4	7.1	02.79		39	42.718	.0586	+6	38	13.01	.968	2	2	
2760	7.3	7.4	02.81		39	52.498	.0748	-1	12	56.47	.970	2	2	
2761	5.2		01.84		41	16.933	.0667	+2	55	55.92	.980	2	2	
2762	7.9	7.5	02.89		41	27.489	.0724	-0	1	28.89	.981	2	2	
2763	7.3		01.85		42	30.793	.0813	-5	1	3.44	.988	2	2	
2764	8.2	8.0	02.93		42	38.172	.0659	+3	40	28.23	.989	3	3	
2765	5.7		01.87		42	48.109	.0781	-3	19	2.94	.990	2	2	*Fund.*
			02.85			48.147				2.76		6	6	
2766	6.4	6.1	02.79		43	24.215	.0841	-6	56	9.23	.994	2	2	
2767	7.7	7.3	02.81		43	42.204	.0696	+1	39	34.66	.996	2	2	
2768	6.1	6.4	02.89		44	20.233	.0715	+0	31	15.22	+20.000	2	2	
2769	8.5		01.84		45	7.619	.0632	+5	59	5.40	.005	2	2	
2770	8.7	8.5	01.85		46	37.252	.0808	-6	14	8.27	.013	2	2	
2771	5.9		01.87		46	50.692	.0692	+2	22	28.55	.014	2	2	
2772	6.1	6.2	02.75		47	47.393	.0770	-3	42	38.65	.018	2	2	
2773	6.3		02.76		47	57.475	.0705	+1	32	4.75	.019	7	7	*Fund.*
2774	8.3	8.1	02.79		47	58.993	.0812	-7	12	21.61	.019	2	2	
2775	7.9	7.6	02.89		48	58.263	.0675	+4	18	56.22	.024	2	2	
2776	7.8	7.5	02.87		49	12.054	.0689	+3	7	22.69	.025	2	2	
2777	7.5		01.84		49	31.179	.0750	-2	30	8.62	.026	2	2	
2778	6.0		01.85		49	39.522	.0728	-0	26	49.03	.027	2	2	
2779	7.5		01.87		50	0.017	.0777	-5	13	27.91	.028	2	2	
2780	6.8	6.8	02.93		50	0.824	.0657	+6	30	53.96	.028	3	3	
2781	7.0	7.0	02.92		50	30.830	.0649	+7	40	0.77	.030	2	2	
2782	7.2	7.0	02.75		51	39.977	.0688	+4	10	6.43	.034	2	2	
2783	8.2	7.8	02.79		51	58.913	.0703	+2	30	53.41	.035	2	2	
2784	5.0		02.82		53	33.228	.0750	-4	6	39.05	.039	11	11	*Fund.*
2785	4.2		01.87		54	10.562	.0686	+6	18	34.74	.040	4	4	*Fund.*
2786	7.2		01.87		54	26.644	.0737	-2	24	27.26	.041	2	2	
2787	7.0	7.0	02.87		54	32.879	.0759	-6	26	54 14	.041	2	2	
2788	7.0		01.84		54	39.129	.0728	-0	50	10.86	.041	2	2	
2789	8.3	8.0	02.75		54	46.919	.0695	+5	24	3.33	.042	2	2	
2790	8.8	8.3	02.79		55	26.982	.0721	+0	30	33.28	.043	2	2	
2791	8.1	8.0	02.89		55	31.516	.0725	-0	20	1.85	.043	2	2	
2792	8.5	8.5	02.92		55	52.244	.0747	-5	29	4.80	.044	2	2	Pr. Mo. -^{s}.019 -0″.16
2793	5.1		01.87		56	41.976	.0736	-3	35	2.63	.045	2	2	
2794	4.6		02 78		56	49.909	.0745	-6	34	11.61	.045	7	7	*Fund.*
2795	6.3		01.85		57	22.965	.0702	+7	55	47.71	.046	2	2	
2796	7.7		01.84		57	39.391	.0720	+1	34	32.24	.046	2	2	
2797	7.9	7.8	02.75		58	32.854	.0718	+3	21	1.93	.046	2	2	
2 Ceti	4.6		02.92		58	37.039	.0749	-17	53	33.92	.046	2	2	*Fund.*
2798	8.3	8.1	02.79		59	39.029	.0723	+0	58	50.34	.047	2	2	

The Heliometer Lists. In Volume VI there were published the early observations of special lists of stars, for which places were desired for Heliometer measures. These observations were made in 1898 and 1900, and were reduced with the places of selected lists of Fundamental stars, which are also printed in connection with the observations. The places of the Fundamental stars for 1898 were derived by Dr. Gill. The places of the Fundamental stars selected by Dr. Gill, for the observations of 1900, were taken from the B. J. with Dr. Auwers' corrections included, for such stars as are in that list. The places of the remaining stars were determined here, by observations, which were reduced with Auwers' corrected B. J. places of Fundamental stars.

The lists of 1898 and 1900 are consequently reduced to different fundamental systems, both differing from the system of Newcomb.

By comparing the respective places of the Fundamental stars, which are common to two or more systems, the relative corrections may be determined. But it is believed that greater precision in the individual places will be reached by deriving the differential corrections from the direct comparison of the final places of all the stars observed. If the entire list of Fundamental stars had been included in Newcomb's Catalogue, the former method would have given satisfactory results, but for some lists less than half the number of fundamentals could be used as a basis of comparison. In deriving the mean corrections, proper motions have been applied, where they have been known. But the observations have not been corrected for proper motion.

The stars observed in 1900 were contained in seven short lists. The stars observed in 1898 were all included in the lists for 1900, and have consequently received eight determinations each, since four observations were made in each year. In 1898 the stars were observed twice in each position of the instrument. In 1900 the instrument was not reversed, and the four observations were made fixed circle West. Taking into account the derivation and application of the systematic corrections, all three lists may be given the same weight in combining the results at the different epochs.

The respective corrections to the lists of observations, published in Volume VI, pages 120 to 143, are given below. The mean of the residuals, from the mean correction, is given for each list. This is usually smaller than the average difference; which indicates that the systematic corrections are real, and not due to accidental errors alone.

1898 OBSERVATIONS.

Stars.	R. A.	Decl.	$\Delta\alpha$	Mean v	$\Delta\delta$	Mean v
	h	°	s	s	"	"
50	16.7	- 20.8	+0.016	±0.023	+0.27	±0.30
Average,			±0.026		±0.40	

1900 OBSERVATIONS.

Stars.	R. A.	Decl.	Δα	Mean v	Δδ	Mean v
	h	°	s	s	″	″
19	5.6	+21.8	+0.011	±0.025	−0.06	±0.23
13	8.1	+24.7	− .004	.023	− .03	.16
8	12.4	− 0.7	+ .010	.023	+ .23	.24
7	14.3	−12.0	+ .041	.022	+ .36	.18
37	16.3	−20.4	− .013	.023	+ .26	.30
5	17.3	−20.5	− .007	.018	− .08	.25
9	18.1	−22.5	− .013	.019	+ .35	.17
Sum, 98			s	s	″	″
Means,			−0.001	±0.022	+0.15	±0.24
Average,			±0.025		±0.31	

The last three lists contain the same stars that were observed in 1898.

The comparison of the residuals indicates the probable errors of the different lists. The first two sets of observations, 1898 and 1900, treated as of equal weight, have probable errors of ± 0^{s}.011, and ± 0″.16, each. There would remain, for the probable errors of the Zodiacal Catalogue: ± 0^{s}.015 and ± 0″.16; values which are in fair agreement with those derived from the comparison of individual observations. These probable errors do not include the effect of magnitude equation upon the Right Ascension; nor the effect of graduation error, in the Declinations, except for the 1898 observations.

The corrected places from the early observations are listed below. Each place depends upon four observations. These stars are noted with an (*) in the Zodiacal Catalogue, preceding.

HELIOMETER LISTS, FROM VOLUME VI.

Reduced to the system of the Zodiacal Catalogue.

No.	Epoch.	R. A. 1900.0.	Decl. 1900.0.	No.	Epoch.	R. A. 1900.0.	Decl. 1900.0.
		h m s	° ′ ″			h m s	° ′ ″
663	1900.1	5 19 13.737	+20 29 32.51	933	1900.1	7 54 52.870	+25 39 59.84
668	0.1	21 37.713	21 51 5.43	936	0.1	55 2.549	23 51 28.70
669	0.1	21 51.387	23 12 33.93	946	0.1	8 1 52.528	24 18 27.19
672	0.1	24 8.819	21 18 5.10	948	0.1	2 5.928	25 0 15 86
679	0.1	27 42.176	20 24 11.93	949	0.1	2 18.043	25 50 33.81
680	0.1	28 53.817	22 30 3.44	953	0.1	4 25.886	25 48 39.02
688	0.1	31 40.087	21 4 53.86	957	0.1	7 46.264	23 26 19.22
695	0.1	36 1.235	22 36 36.36	960	0.1	8 44.274	25 2 16.47
697	0.1	37 15.145	23 9 24.87	966	0.1	14 35.462	24 20 14.62
698	0 1	37 22.511	21 22 8.82	967	0.1	14 41.222	25 39 5.13
703	0.1	41 12.612	22 29 27.93	969	0.1	15 56.972	23 16 12.17
706	0.1	41 40.316	20 54 16.15	977	0.1	20 43.038	24 51 46.64
711	0.1	45 45.791	23 21 21.84	980	0.1	8 21 31.955	+23 28 50.13
715	0.1	47 18.141	22 3 2.38	1396	0.4	12 14 47.347	− 0 6 39.58
717	0.1	48 27.666	20 15 27.63	1405	0.4	20 10.797	− 0 30 57.41
724	0.1	52 57.681	20 40 0.99	1408	0.4	21 38.840	+ 0 22 13.18
726	0.1	53 39.367	21 35 47.52	1413	0.4	24 1.939	− 1 52 35.05
727	0.1	54 24.516	22 53 37.75	1414	0.4	24 15.345	− 0 40 47.76
734	0.1	5 58 2.511	+23 16 7.59	1421	0.4	27 52.132	+ 0 16 37.25
				1424	0.4	29 15.707	− 0 51 23.24
				1428	0.4	12 31 57.763	− 1 46 2.76

HELIOMETER LISTS, FROM VOLUME VI.

Reduced to the system of the Zodiacal Catalogue.

No.	Epoch.	R. A. 1900.0.	Decl. 1900.0.
		h m s	° ′ ″
1618	1900.4	14 8 20.707	−11 22 10.83
1630	0.4	13 26.271	11 36 5.50
1631	0.4	13 41.880	12 54 39.56
1637	0.4	18 2.693	11 15 26.65
1639	0.4	18 24.293	12 29 11.95
1641	0.4	19 18.285	11 12 56.42
1646	0.4	14 22 19.957	−12 54 35.42
1809	1898.5	15 47 31.619	−19 52 5.23
	1900.5	31.601	5.15
1816	98.5	49 13.526	19 5 15.27
	00.5	13.505	15.72
1819	98.5	51 20.833	21 11 41.51
	00.5	20.851	41.95
1824	98.5	53 19.305	19 39 6.32
	00.5	19.318	5.80
1829	98.5	55 14.357	20 52 22.45
	00.5	14.350	22.41
1831	98.5	57 18.258	19 33 45.21
	00.5	18.307	44.95
1835	98.5	59 37.263	19 31 54.23
	00.5	37.233	54.28
1836	98.5	59 49.745	21 33 56.22
	00.5	49.712	56.41
1839	98.5	16 0 57.336	20 23 53.95
	00.5	57.349	53.99
1842	98.5	1 32.297	20 35 54.84
	00.5	32.321	55.03
1850	98.5	6 10.889	19 11 3.14
	00.5	10.912	2.79
1854	98.5	7 47.620	21 8 40.78
	00.5	47.606	40.89
1857	98.5	8 52.917	18 16 43.85
	00.5	52.923	43.78
1858	98.5	8 57.389	22 7 36.21
	00.5	57.353	36.75
1861	98.5	11 8.394	19 51 20.20
	00.5	8.399	19.80
1863	98.5	13 16.259	19 58 26.35
	00.5	16.236	26.75
1866	98.5	14 41.603	18 26 58.05
	00.5	41.572	58.11
1867	98.5	14 47.872	21 36 0.90
	00.5	47.864	0.97
1870	98.5	16 53.101	22 52 56.81
	00.5	53.073	57.29
1872	98.5	18 14.980	19 48 12.08
	00.5	14.972	11.84
1876	98.5	19 35.841	19 36 23.97
	00.5	35.826	23.66
1878	98.5	21 13.563	18 13 45.85
	00.5	13.603	46.06
1879	98.5	21 18.189	21 53 32.79
	00.5	18.148	33.29
1882	98.5	23 24.449	21 20 51.14
	00.5	24.468	50.97
1883	1898.5	16 23 54.098	−18 27 13.74
	1900.5	54.040	14.68
1891	98.5	26 12.417	21 15 9.02
	00.5	12.447	8.57
1892	98.5	26 32.253	20 32 16.82
	00.5	32.245	16.29
1895	98.5	28 55.468	19 43 54.79
	00.5	55.460	54.99
1897	98.5	29 41.287	18 27 55.88
	00.5	41.257	56.15
1900	98.5	31 41.154	21 51 9.85
	00.5	41.153	10.49
1902	98.5	32 19.728	22 41 24.90
	00.5	19.702	25.15
1905	00.5	32 45.185	18 37 30.31
1907	98.5	34 40.720	20 12 49.05
	00.5	40.715	48.91
1912	98.5	36 0.874	19 43 57.84
	00.5	0.898	57.64
1913	98.5	37 5.383	21 9 8.09
	00.5	5.387	7.94
1916	98.5	39 7.715	22 59 52.17
	00.5	7.699	52.27
1922	98.5	43 37.082	21 40 35.65
	00.5	37.098	35.96
1980	98.5	17 15 0.575	21 0 19.94
	00.5	0.565	20.13
1984	98.5	17 0.953	20 7 6.41
	00.5	0.973	6.46
1988	98.5	18 43.136	21 20 53.09
	00.5	43.138	53.51
1995	98.5	22 18.289	20 52 50.19
	00.5	18.289	50.11
1998	98.5	23 49.618	19 23 33.80
	00.5	49.617	33.63
2068	98.5	18 1 11.476	21 27 14.85
	00.5	11.459	14.62
2069	98.5	1 41.009	23 6 58.83
	00.5	41.032	58.97
2076	98.5	4 42.134	22 15 30.09
	00.5	42.118	30.57
2080	98.5	5 37.197	23 43 17.11
	00.5	37.177	17.58
2082	98.5	7 46.968	21 5 6.13
	00.5	46.982	5.84
2084	98.5	8 15.436	21 44 23.83
	00.5	15.425	23.17
2090	98.5	10 27.601	23 56 2.43
	00.5	27.628	2.84
2093	98.5	11 54.725	22 22 45.10
	00.5	54.660	45.44
2099	98.5	18 15 59.279	−22 58 3.45
	00.5	59.261	3.49

Comparison with the A. G. Zones. The observed places of this list have been compared with the places from the A. G. Zones, brought forward with the Precessions of the last. The difference will include the difference of the two fundamental systems, the systematic errors of the respective observations, and the general effect of proper motion for the difference of the epochs. Proper motion has been applied to the older observations, whenever a value has been found, noted usually in the observed list. While the Strassburg and Vienna-Ottakring zones were of later epoch than the others, the differences appear to fall into place in the general comparison.

A comparison with Warsaw 1880, which was reduced to the same system as the A. G. Zones, has also been made; and the results are given in Table III, following.

The details of the comparison follow, in three tables. The mean of the systematic differences is small: $0^s.006$ in Right Ascension, or $0^s.003$ if the difference for 4^h be excluded from the mean; and $0''.19$ in Declination, evidently systematic. In general, differences of $\pm 0^s.25$ and $\pm 2''.5$ have not been included in the means. The average residuals are: $\pm 0^s.05$ and $\pm 0''.6$, per star. Above 1800 comparisons are included.

In Table I, the results of each hour are combined, for each Catalogue. A few stars, just outside of the limit of the hour, have occasionally been included in the means. The Table gives the number of stars, the mean R. A. and Decl., and the mean differences. Eighteen hours of Right Ascension are included. The stars of the remaining six hours are South of the published zones. A large proportion of these stars will be included in the comparison with the Cordoba General Catalogue, which is given later on.

In Table II, the results of the preceding comparison have been combined in hourly groups, which may be taken to represent the difference between the observations made here, and the A. G. Zone system. The separate Catalogue results have been weighted according to the number of observations, in this combination.

Under the heading of Rate, the respective hourly differences have been adjusted, to give a series of values with a simple periodic variation, depending upon the Right Ascension. The effect of this adjustment is to reduce the residuals of individual hours, to less than half the original values.

In Table III, the hourly differences of Table I have been combined, for each Catalogue. The groups for the same Catalogue are usually separated by an interval; but in the Berlin zones, the two groups are adjacent, for the purpose of indicating more clearly the periodic variation.

In the column headed II, the adjusted values of Table II have been entered; and the comparison with the separate Catalogue difference indicates the correction necessary to reduce the individual Catalogues to the A. G. system, as determined by the medium of the present series of observations.

Table III gives the limits of R. A. and Decl. for each Catalogue, included in this comparison. For the respective Catalogues, the simple mean of the individual hourly differences has been taken. The corrections to the individual Catalogues are noticeably smaller in general than the original observed differences.

The corrections which would be introduced in the A. G. Zone places, by the use of Newcomb's Precessions, for the interval, would amount to: $-0^s.010 - 0^s.009 \sin \alpha$; and $-0''.13 \cos \alpha$. This would increase the systematic difference in R. A. by $+0^s.013$, for the hours included here. The systematic difference in Decl. would remain the same, the average change would be $\pm 0''.09$, and the average residual would not be diminished.

I. OBS.—A. G. ZONES.

Cat.	No.	R. A.	Decl.	$\Delta \alpha$	$\Delta \delta$
		h	°	s	″
Stras. . .	22	0.3	− 3.2	+.043	−0.25
Nicol. . .	28	0.6	− 0.5	+.081	− .09
Alb. . . .	31	0.5	+ 3.0	+.021	+ .15
Leip. II .	46	0.5	+ 7.6	−.041	− .09
Leip. I . .	19	0.8	12.3	+.005	+ .28
Alb. . . .	28	1.4	+ 3.6	+.014	− .20
Leip. II .	36	1.5	+ 7.9	−.016	− .10
Leip. I . .	44	1.4	12.8	−.018	− .04
Ber. A . .	18	1.5	16.3	+.038	− .93
Leip. II .	21	2.3	+ 8.4	−.020	− .16
Leip. I . .	44	2.5	12.9	+.018	− .28
Ber. A . .	46	2.5	18.1	+.053	− .61
Ber. B. . .	22	2.6	22.1	+.009	− .06
Leip. I . .	29	3.5	13.9	+.010	− .33
Ber. A . .	38	3.5	18.1	+.021	− .54
Ber. B . .	49	3.5	22.8	+.016	− .38
Ber. A . .	50	4.5	17.4	+.088	− .54
Ber. B . .	48	4.5	22.7	+ 055	− .41
Cam. . .	28	4.4	27.0	+.008	− .31
Ber. A . .	38	5.5	18.3	+.025	− .84
Ber. B . .	41	5.5	22.6	+.008	− .42
Cam. . .	31	5.5	27.5	−.019	− .23
Ber. A . .	33	6.4	18.1	+.023	− .56
Ber. B . .	46	6.5	22.5	+.019	− .29
Cam. . .	34	6.5	27.4	−.019	+ .05
Ber. A . .	35	7.5	17.7	+.003	−0.78
Ber. B . .	38	7.5	22.6	−.004	− .24
Cam. . .	26	7.5	26.7	−.021	+ .04
Leip. I . .	16	8.6	13.5	−.024	− .31
Ber. A . .	38	8.5	17.4	−.024	− .46
Ber. B . .	34	8.4	22.6	−.019	− .46
Leip. II .	20	9.7	+ 8.1	−.045	−0.01
Leip. I . .	34	9.5	12.1	−.080	− .52
Ber. A . .	35	9.5	17.5	−.024	− .37
Ber. B . .	37	9.3	21.4	−.076	+ .28
Alb. . . .	19	10.6	+ 3.0	−.034	− .11
Leip. II .	39	10.5	+ 7.4	−.047	− .19
Leip. I . .	37	10.5	12.2	−.069	− .09
Ber. A . .	18	10.3	16.3	−.028	− .37
Stras. . .	17	11.7	− 3.9	+.011	− .24
Nicol. . .	25	11.4	− 0.6	−.002	− .04
Alb. . . .	34	11.5	+ 2.7	−.026	+ .02
Leip. II .	36	11.6	+ 6.8	−.039	+ .07
Leip. I . .	13	11.2	11.8	−.072	− .45
Ottak. . .	26	12.4	− 7.6	+.018	+ .14
Stras. . .	37	12.5	− 4.1	+.012	− .03
Nicol. . .	30	12.7	− 0.8	−.031	+ .37
Alb. . . .	27	12.5	+ 2.2	−.046	+ .25
Ottak. . .	36	13.5	− 8.2	+.011	+ .04
Stras. . .	32	13.5	− 4.4	−.014	− .21
Ottak. . .	22	14.3	− 8.4	+.013	− .10
Ottak. . .	22	21.6	− 8.6	+.051	+ .22
Ottak. . .	32	22.5	− 7.8	+.067	− .17
Stras. . .	26	22.5	− 4.3	+.024	+ .04
Ottak. . .	32	23.5	− 7.5	+.053	− .21
Stras. . .	31	23.5	− 3.9	+.051	− .15
Nicol. . .	26	23.4	− 0.3	+.031	− .14
Alb. . . .	25	23.6	+ 3.0	+.022	+ .12

II. OBS.—A. G. ZONES: HOURLY DIFFERENCES.

R. A.	No.	Decl.	$\Delta \alpha$	Rate.	Obs.—c.	$\Delta \delta$	Rate.	Obs.—c.	Cat.
h		°	s	s	s	"	"	"	
21.6	22	− 8.6	+.051	+.058	−.007	+0.22	−0.05	+0.27	1
22.5	58	− 6.3	+.049	+.050	−.001	− .08	− .09	+ .01	2
23.5	114	− 2.2	+.040	+.042	−.002	− .10	− .13	+ .03	4
0.5	146	+ 4.0	+.017	+.034	−.017	− .01	− .17	+ .16	5
1.4	126	+ 9.9	.000	+.026	−.026	− .24	− .21	− .03	4
2.5	133	15.4	+.022	+.018	+.004	− .33	− .25	− .08	4
3.5	116	19.0	+.016	+.010	+.006	− .42	− .29	− .13	3
4.5	126	21.7	(+.057)	+.002	(+.055)	− .44	− .33	− .11	3
5.5	110	22.4	+.007	−.006	+.013	− .52	− .37	− .15	3
6.5	113	22.6	+.009	−.014	+.023	− .27	− .33	+ .06	3
7.5	99	21.9	−.006	−.022	+.016	− .36	− .29	− .07	3
8.5	88	18.7	−.022	−.030	+.008	− .43	− .25	− .18	3
9.5	106	14.8	−.055	−.038	−.017	− .25	− .21	− .04	4
10.5	113	+ 9.7	−.049	−.030	−.019	− .17	− .17	.00	4
11.5	125	+ 3.5	−.026	−.022	−.004	− .05	− .13	+ .08	5
12.5	120	− 2.5	−.011	−.014	+.003	+ .16	− .09	+ .25	4
13.5	68	− 6.3	−.001	−.006	+.005	− .08	− .05	− .03	2
14.3	22	− 8.4	+.013	+.002	+.011	− .10	− .01	− .09	1
Sum, 18	1805								
		°	s	s	s	"	"	"	
Mean . .	100	+ 8.3	+.003	+.003	.000	−0.19	−0.19	0.00	3
v			±.023		±.011	±0.23		±0.10	

III. OBS.—A. G. ZONES: SEPARATE CATALOGUES, AND CORRECTIONS.

Cat.	No.	Limits.			$\Delta \alpha$	II	Correc.	$\Delta \delta$	II	Correc.
		h h	°	°	s	s	s	"	"	"
Cam . .	119	4 to 7	+25	+30	−.013	−.010	−.003	−0.11	−0.35	+0.24
Ber. B .	160	2 to 5	+20	+25	+.022	+.006	+.016	−0.32	−0.31	−0.01
	135	6 to 9			−.020	−.026	+.006	− .18	− .27	+ .09
Ber. A .	190	1 to 5	+15	+20	+.045	+.010	+.035	−0.69	−0.29	−0.40
	159	6 to 10			−.010	−.030	+.020	− .51	− .25	− .26
Leip. I .	136	0 to 3	+10	+15	+.004	+ 022	−.018	−0.09	−0.23	+0.14
	100	8 to 11			−.061	−.034	−.027	− .34	− .19	− .15
Leip. II .	103	0 to 2	+ 5	+10	−.026	+.026	−.052	−0.15	−0.21	+0.06
	95	9 to 11			−.044	−.030	−.014	− .04	− .17	+ .13
Alb. . .	84	23 to 1	+ 1	+ 5	+.019	+.034	−.015	+0.02	−0.17	+0.19
	80	10 to 12			−.035	−.022	−.013	+ .05	− .13	+ .18
Nicol. .	54	23 to 0	− 2	+ 1	+.056	+.038	+.018	−0.12	−0.15	+0.03
	55	11 to 12			−.017	−.018	+.001	+ .17	− .11	+ .28
Stras. .	79	22 to 0	− 6	− 2	+.039	+.042	−.003	−0.12	−0.13	+0.01
	86	11 to 13			+.003	−.014	+.017	− .16	− .09	− .07
Ottak. .	86	21 to 23	−10	− 6	+.057	+.050	+.007	−0.05	−0.09	+0.04
	84	12 to 14			+.014	−.006	+.020	+ .03	− .05	+ .08
Sum, . 9	1805	17								
					s	s	s	"	"	"
Mean					+.002	+.002	.000	−0.15	−0.19	+0.04
Average					±.029	±.025	±.017	±0.19	±0.19	±0.14
Warsaw .	58	22 to 0	− 6	− 2	+.030	+.042	−.012	+0.23	−0.13	+0.36
1880	62	11 to 13			−.021	−.014	−.007	− .08	− .09	+ .01

Comparison with the Cordoba General Catalogue. A large proportion of the Southern stars of this list have been compared with the Cordoba General Catalogue, which contains, in some hours, as high as seventy per cent of the Zodiacal list.

The difference, as in the comparison preceding, will include the systematic differences due to observation and reduction, and the general effect of proper motion. Large proper motions have usually been applied, when known.

The combination of the differences has been made in two 10° groups and two 5° groups, in order to exhibit any variation depending upon Declination. But three of these groups will be found in any one hour of Right Ascension. The mean differences are:

Obs. — C. G. C., $+0^s.010$ in R. A. and $-0''.42$ in Decl.

Table I gives the separate hourly means for the Declination zones. The summation at the foot of the table will show that there is no sensible variation with respect to Declination, in either difference.

In Table II the material for each hour has been combined. A decided periodic variation in $\Delta\alpha$ is exhibited, similar to that found in the comparison of the observed places of the Southern Piazzi stars, with the same Catalogue, and tabulated in Vol. VI, page 176. The variation derived for that earlier series was clearly due to the systematic difference, periodic in character, between the Fundamental places employed in the reduction, and the places of the Cordoba Catalogue. The hourly differences have been here adjusted, in the column headed Rate, in Table II; and the use of this rate has evidently reduced the average residual per hour to but little more than a third of its observed amount. For the $\Delta\delta$ there does not appear to be any decided periodic variation. Over 600 comparisons are included, averaging more than 50 per hour.

I. OBS.—CORDOBA GEN. CAT. DECLINATION ZONES.

R. A.	No.	Decl.	Δα	Δδ	Δα	Δδ	Δα	Δδ	Δα	Δδ
h		°	s	"	s	"	s	"	s	"
12.5	14	- 4.7	-.047	-0.15						
13.5	7	- 4.3	-.027	- .51						
13.5	22	-13.8			-.028	-0.31				
14.5	31	-14.7			-.048	- .56				
14.5	11	-21.7					-.014	-0.62		
15.5	33	-16.4			-.012	- .32				
15.5	21	-23.1					-.026	- .44		
15.5	12	-25.7							-.054	-0.75
16.5	20	-17.4			-.025	- .09				
16.5	26	-23.0					-.038	- .18		
16.5	24	-26.9							-.032	- .25
17.5	14	-17.7			+.006	- .39				
17.5	29	-23.2					-.006	- .45		
17.5	32	-27.6							-.004	- .43
18.5	15	-18.6			-.007	- .19				
18.5	32	-22.6					+.047	- .43		
18.5	28	-27.9							+.051	- .59
19.5	24	-17.5			+.058	- .19				
19.5	28	-23.2					+.033	- .27		
19.5	22	-27.1							+.052	- .28
20.5	37	-15.3			+.036	- .15				
20.5	21	-22.8					+.006	- .33		
20.5	5	-26.0							-.006	- .05
21.5	39	-15.4			+.056	- .61				
21.5	14	-21.4					+.046	- .73		
22.5	12	- 4.8	+.016	-1.11						
22.5	32	-13.1			+.049	- .78				
23.5	11	- 3.6	+.034	- .35						
23.5	18	-11.9			+.064	- .91				
0.3	8	- 3.4	+.036	-1.49						
Sum; 13	642		52		285		182		123	
Mean Decl.			-4°.2		-15°.7		-22°.6		-26°.9	
Mean Diff.			.000 s	-0.66 "	+.017 s	-0.42 "	+.006 s	-0.38 "	+.010 s	-0.41 "

II. OBS.—CORDOBA GEN. CAT. HOURLY MEANS.

R. A.	No.	Decl.	Δα	v	Rate.	Obs.—c.	Δδ	v
h		°	s	s	s	s	"	"
12	14	- 4.7	-.047	-.054	-.037	-.010	-0.15	+0.29
13	29	11.4	-.028	-.035	-.029	+.001	- .36	+ .08
14	42	16.5	-.039	-.046	-.021	-.018	- .57	- .13
15	66	20.2	-.024	-.031	-.013	-.011	- .43	+ .01
16	70	22.8	-.033	-.040	-.005	-.028	- .18	+ .26
17	75	23.9	-.003	-.010	+.003	-.006	- .43	+ .01
18	75	23.9	+.038	+.031	+.011	+.027	- .45	- .01
19	74	22.6	+.048	+.041	+.019	+.029	- .25	+ .19
20	63	18.7	+.022	+.015	+.027	-.005	- .20	+ .24
21	53	16.9	+.053	+.046	+.035	+.018	- .64	- .20
22	44	11.0	+.040	+.033	+.043	-.003	- .87	- .43
23	29	- 8.6	+.052	+.045	+.051	+.001	- .69	- .25
Mean			+.007 s		+.007 s		-0.44 "	
Average				±.036 s		±.013 s		±0.17 "

Comparison with the Washington Zodiacal Catalogue. A copy of the Zodiacal Catalogue prepared by H. B. Hedrick, and published as *Part III, Vol. VIII, Astronomical Papers American Ephemeris and Nautical Almanac, Washington, 1905*, was received at the time that this volume of observations was nearly ready for press. The Catalogue contains 1607 stars, the places of which have been compiled from early observations, and reduced to Newcomb's fundamental system. No late authorities are included, only two later than 1890. Proper motions are given for the greater part of the stars, and have been included in the reduction to the epochs, 1900 and 1920. These proper motions have been used, in making the comparison with the observations of this Volume, the epoch of which is close to 1900.

The tabulation of the comparison, in hourly groups, follows. The mean differences are small, $0^{s}.010$ and $0''.05$. The average differences are $\pm 0^{s}.038$ and $\pm 0''.48$. The table of comparisons has been arranged to include also the mean residual from each hourly mean difference. The average of these residuals is slightly smaller than the average of the differences, but these last are evidently mainly accidental in character.

Differences exceeding $0^{s}.2$ and $2''$ have not been included in the means. They are probably due to proper motions, that have not been precisely determined for the Washington Catalogue. Nine differences were omitted in Right Ascension, and eleven in Declination.

COMPARISON WITH WASHINGTON ZODIACAL CATALOGUE, 1900. W.—L. O.

R. A.	Decl.	Stars.	$\Delta\alpha$	v	Mean v	$\Delta\delta$	v	Mean v
h	°		s	s	s	"	"	"
0.5	+ 5.6	49	+0.002	−0.008	±0.036	+0.05	0.00	±0.51
1.5	10.0	47	+ .008	− .002	.031	+ .07	+ .02	.56
2.5	16.2	49	− .003	− .013	.036	+ .11	+ .06	.40
3.5	20.1	54	+ .014	+ .004	.029	.00	− .05	.41
4.5	20.3	73	− .010	− .020	.032	+ .10	+ .05	.44
5.5	22.4	60	− .009	− .019	.037	+ .05	.00	.38
6.5	22.4	59	− .011	− .021	.040	+ .07	+ .02	.44
7.5	22.1	50	− .007	− .017	.031	+ .05	.00	.59
8.5	18.7	39	− .004	− .014	.034	− .12	− .17	.44
9.5	14.1	40	+ .023	+ .013	.040	− .11	− .16	.39
10.5	9.2	44	+ .007	− .003	.036	+ .11	+ .06	.46
11.5	+ 3.5	47	+ .011	+ .001	.037	− .14	− .19	.43
12.5	− 2.3	48	+ .016	+ .006	.040	+ .03	− .02	.47
13.5	9.4	48	+ .018	+ .008	.031	− .03	− .08	.45
14.5	13.9	46	+ .021	+ .011	.034	+ .22	+ .17	.52
15.5	19.7	55	+ .019	+ .009	.042	+ .14	+ .09	.54
16.5	22.1	58	+ .044	+ .034	.036	+ .23	+ .18	.46
17.5	23.1	54	+ .023	+ .013	.039	+ .09	+ .04	.57
18.5	23.3	61	+ .020	+ .010	.039	+ .17	+ .12	.53
19.5	22.4	60	+ .019	+ .009	.035	− .04	− .09	.49
20.5	18.2	46	+ .022	+ .012	.038	+ .08	+ .03	.49
21.5	15.3	52	+ .004	− .006	.036	− .14	− .19	.54
22.5	9.4	49	− .002	− .012	.039	+ .12	+ .07	.47
23.5	− 3.5	55	+ .008	− .002	.028	+0.10	+ .05	.40
Sum . . .		1243						
			s	s	s	"	"	"
Mean . . .		51	+0.010	0.000	±0.036	+0.05	0.00	±0.47
Average			±0.038	±0.011		±0.48	±0.08	

Comparison with the Cape Catalogue, 1900. The Catalogue of the Royal Observatory, at the Cape of Good Hope, for the epoch 1900, contains the observations of the full list of Zodiacal stars. From the greater number of observations per star, the places should be of higher precision than those contained in this Volume. The zenith distance is approximately the same for the mean of the list. The same refractions were employed in the reduction of both, and the same fundamental system. Of four stars referred to, in the volume of detailed results at the Cape (p. XIII), as exhibiting large residuals for Newcomb's Declinations, three were observed here. The respective observed corrections are as follows:

Newcomb, No. 505	Cape — $0''.75$	L. O. — $0''.49$
526	— $0\ .52$	— $0\ .44$
682	— $0\ .64$	— $0\ .31$

The table of comparisons, below, is entirely similar to that of the Washington Catalogue. The mean residual from the hourly differences is much smaller than the average difference in Right Ascension. This is due to the considerable systematic difference, which itself undoubtedly arises from the effect of magnitude equation, for which corrections have been applied in the results at the Cape. This correction has also been discussed below.

There is a small systematic difference in Declination, but the average difference is not much greater than the average residual from the hourly means. The largest residuals remaining in this comparison are $\pm 0^{s}.12$ and $\pm 1''.5$, in Right Ascension and Declination, respectively. One difference in Right Ascension was not included, that for *β* Virginis, at $11^{h}\ 45^{m}\ 29^{s}$, in which the Cape differs from Newcomb by $0^{s}.2$.

The average differences, taken without regard to sign, are: $\pm 0^{s}.039$ and $\pm 0''.35$.

The average differences from the hourly means are: $\pm 0^{s}.029$ and $\pm 0''.34$.

The means at the foot of the table are derived from the total sum of the differences. The means of the hourly differences would be the same, however, in this case, as the weights of the hourly differences are nearly equal.

COMPARISON WITH CAPE ZODIACAL CATALOGUE, 1900. C.—L. O.

R. A.	Decl.	Stars.	$\Delta\alpha$	v	Mean v	$\Delta\delta$	v	Mean v
h	°		s	s	s	″	″	″
0.5	+ 4.0	131	-0.039	-0.008	±0.028	-0.11	-0.07	±0.38
1.5	9.7	126	- .031	.000	.031	.00	+ .04	.35
2.5	15.5	130	- .032	- .001	.032	- .02	+ .02	.32
3.5	19.4	115	- .024	+ .007	.031	- .07	- .03	.35
4.5	21.2	126	- .033	- .002	.028	- .13	- .09	.33
5.5	23.4	110	- .043	- .012	.030	+ .07	+ .11	.35
6.5	22.7	113	- .036	- .005	.028	- .11	- .07	.36
7.5	21.8	93	- .035	- .004	.030	- .04	.00	.29
8.5	17.8	90	- .024	+ .007	.031	- .04	.00	.33
9.5	14.6	105	- .014	+ .017	.033	- .12	- .08	.34
10.5	9.1	117	- .029	+ .002	.029	- .12	- .08	.33
11.5	+ 2.2	115	- .041	- .010	.029	- .15	- .11	.30
12.5	- 2.8	114	- .038	- .007	.027	- .07	- .03	.28
13.5	5.3	121	- .027	+ .004	.031	- .05	- .01	.29
14.5	13 9	117	- .035	- .004	.027	+ .05	+ .09	.32
15.5	19.6	116	- .028	+ .003	.029	+ .04	+ .08	.40
16.5	21.5	120	- .024	+ .007	.030	- .08	- .04	.39
17.5	23.0	114	- .026	+ .005	.031	- .03	+ .01	.33
18.5	23.1	108	- .023	+ .008	.026	.00	+ .04	.33
19.5	21.8	116	- .029	+ .002	.025	- .16	- .12	.32
20.5	18.6	118	- .023	+ .008	.025	- .05	- .01	.34
21.5	14.6	127	- .031	.000	.027	- .04	.00	.33
22.5	10.1	127	- .040	- .009	.028	+ .11	+ .15	.34
23.5	- 2 3	140	- .041	- .010	.026	+ .12	+ .16	.36
Sum . .		2809	s	s	s	″	″	″
Mean . . .		117	-0.031	0.000	±0.029	-0.04	0.00	±0.34
Average			±0.039	±0.006		±0.35	±0.06	

These catalogue comparisons enable one to form a comparative test of the precision of the respective places. To the results tabulated here, may be added those of the comparison made by A. M. W. Downing in the *Monthly Notices R. A. S.* for January, 1907. He tabulates the comparison, W—C, and finds the mean differences: R. A. + $0^{s}.025$, and Decl. + $0''.10$. And, for the residuals, from three groups of hourly differences, he finds ± $0^{s}.030$ and ± $0''.45$.

There are three combinations, for which the average residuals are known:

W. and L.,	v ± $0^{s}.036$ R. A.	v ± $0''.47$ Decl.
C. and L.,	.029	.34
W. and C.,	.030	.45

From these, the respective probable errors of the catalogue places may be derived, as follows:

L.,	± $0^{s}.021$ R. A.	± $0''.21$ Decl.
W.,	.022	.34
C.,	.014	.20

Since the Cape observations have been corrected for the individual magnitude equations of the various observers, the magnitude equation of the Lick Right Ascensions can be determined from the comparison, assuming that the results at the Cape are practically free from the effect. For this purpose the comparisons have been divided into six groups, below. The results are given, later, in a condensed form, which shows the method of computing the magnitude equation, the differential corrections to Lick, and the comparison of the computed mean corrections and the observed mean corrections, for each group. The mean residual of each group has been tabulated, and this may be treated as the mean difference between the Right Ascensions of the Cape, and those of Lick corrected approximately for magnitude equation. The mean of the residuals is smaller than the mean in the table preceding; corresponding to the improvement in the Lick results, by including the correction for magnitude. The probable error of the Lick Right Ascensions, when corrected for magnitude equation, is thus found to be ± $0^{s}.018$.

This value, and the probable error of the Declinations above, may be considered as in fair conformity with the respective probable errors, derived from the comparison of individual observations. It is usually found that the last form of computing probable errors gives smaller values than would be obtained from the comparison of independent results; owing, no doubt, to the existence of certain systematic errors, which affect the individual results in a similar manner.

In the results, below, the general form of the magnitude equation for Lick, as derived from direct observation, is confirmed; but the value, $0^{s}.012$, is larger than that adopted from direct observation, $0^{s}.008$. The Cape observations have possibly been over corrected.

The tabulation of the comparisons, in hourly groups, is followed by the summation of the results. The means, at the foot of both tables, are derived from the summation of individual results, but they do not differ sensibly from the mean of the hourly values. The magnitudes, in this comparison, are from the Cape Catalogue. Stars brighter than fourth magnitude have not been included, there being a relatively small number of such types. There is not as much difference in the corrections for the two fainter groups as might be anticipated. The correction for Lick would not appear to vary much from a linear form. The negative signs have been omitted, for the greater part of the table of detailed comparisons. The mean residuals of the hourly groups are given at the foot of the table.

It has been considered to be useful to give the results of this comparison in detail, since the subject of the correction for magnitude is of vital importance, in deriving places that will be of independent value. And the Cape Catalogue is, moreover, the first large catalogue, in which the Right Ascensions have been corrected, in the form of the published results.

RELATIVE MAGNITUDE EQUATION OF THE LICK RIGHT ASCENSIONS: CAPE 1900—LICK.

	No.	Mag.	$\Delta\alpha$	No	Mag.	$\Delta\alpha$	No.	Mag.	$\Delta\alpha$	No.	Mag.	$\Delta\alpha$	No.	Mag.	$\Delta\alpha$	No.	Mag.	$\Delta\alpha$
h			s			s			s			s			s			s
0	11	5.3	+.005	25	6.4	-.029	38	7.5	-.041	16	8.1	-.044	31	8.7	-.049	10	9.1	-.060
1	10	.3	-.012	25	.5	.015	31	.4	.033	19	.1	.049	29	.6	.056	10	.1	.043
2	19	.5	-.006	23	.5	.008	35	.5	.027	28	.2	.040	19	.6	.050	6	.1	.051
3	22	.2	-.005	31	.5	.017	24	.4	.030	17	.1	.044	17	.6	.045	1	.1	+.003
4	38	.2	-.021	31	.4	.025	19	.4	.036	12	.2	.043	16	.6	.063	5	.2	.058
5	30	.2	-.023	31	.5	.035	17	.5	.055	12	.2	.066	16	.7	.061	2	.2	.070
6	21	.4	-.028	41	.5	.033	19	.4	.034	12	.1	.045	13	.6	.068	1	.0	.113
7	20	.4	-.010	25	.4	.024	21	.3	.051	12	.1	.049	6	.7	.080	3	.0	.065
8	18	.4	-.009	22	.4	.010	15	.4	.024	19	.2	.034	8	.8	.042	8	.0	.048
9	13	.5	-.007	26	.5	.004	28	.4	.001	14	.2	.029	17	.6	.035	6	.1	.054
10	13	.8	-.001	27	.4	.017	21	.4	.038	22	.1	.040	22	.7	.039	9	.1	.046
11	19	.1	-.018	28	.5	.027	17	.4	.053	23	.1	.062	20	.7	.050	7	.1	.036
12	8	.2	-.010	26	.5	.033	27	.4	.037	22	.1	.042	19	.7	.045	11	.0	.056
13	15	.5	-.005	22	.5	.007	39	.4	.025	11	.2	.046	21	.7	.053	12	.1	.037
14	14	.5	-.014	28	.6	.012	38	.4	.045	15	.1	.045	15	.7	.055	5	.1	.051
15	26	.2	-.009	18	.4	.019	33	.4	.030	17	.1	.041	13	.6	.049	5	.1	.076
16	21	.2	+.006	30	.5	.013	25	.4	.036	19	.1	.028	18	.7	.054	3	.1	.046
17	14	.2	-.001	29	.5	.015	25	.4	.010	19	.2	.038	13	.6	.058	10	.1	.072
18	25	.4	-.003	25	.5	.022	28	.4	.030	10	.2	.045	8	.6	.034	5	.4	.047
19	26	.2	-.008	26	.4	.021	29	.4	.033	15	.2	.043	14	.7	.060	4	.2	.039
20	16	.5	+.007	22	.5	.021	38	.4	.022	19	.1	.036	13	.6	.045	7	.3	.030
21	20	.1	-.009	31	.4	.021	28	.4	.041	24	.1	.034	16	.6	.054	5	.2	.062
22	15	.2	-.011	31	.4	.027	39	.4	.044	20	.2	.059	18	.6	.055	3	.1	.025
23	22	.2	-.016	27	.5	.036	46	.5	.043	16	.1	.058	18	.7	.047	10	.1	.053
Sum .	456			650			680			413			400			148		
			s			s			s			s			s			s
Mean		5.27	-.010		6.47	.021		7.41	-.034		8.15	-.044		8.65	-.051		9.10	-.051
v . .			±.007			±.008			±.009			±.006			±.008			±.010

SUMMATION OF THE RELATIVE MAGNITUDE EQUATION: CAPE—LICK.

Mag.	Mean.	Stars.	$\varDelta \alpha$	Mean v	Computed.	Obs.—Com.
			s	s	s	s
4 to 6	5.27	456	-0.010	±0.023	-0.008	-0.002
6.0 to 6.9	6.47	650	- .021	.025	- .023	+ .002
7.0 to 7.9	7.41	680	- .034	.027	- .034	.000
8.0 to 8.4	8.15	413	- .044	.026	- .043	- .001
8.5 to 8.9	8.65	400	- .051	.030	- .049	- .002
9 to 10	9.10	148	- .051	.030	- .054	+ .003
Sum		2747				
			s	s		
Means . . .	7.51		-0.035	±0.026		

$\varDelta$ Magnitude.		$\varDelta$ Corr.	Mag. Eq.	Mag.	Stars.
		s	s		
5.27 to 8.15 =	2.88	-0.034	-0.0118	at 6.71	869
6.47 to 8.65 =	2.18	- .030	- .0138	at 7.56	1050
7.41 to 9.10 =	1.69	- .017	- .0100	at 8.25	828
Sum . .	6.75	-0.081			2747
		s			
Mag. Eq. . . .		-0.012			

DIFFERENTIAL CORRECTIONS TO LICK.

Mag.	Corr.
	s
4.0	+0.007
5.0	- .005
6.0	- .017
7.0	- .029
8.0	- .041
9.0	- .053

Comparison with Volume VI. The observations of the Southern Stars of Piazzi, printed in Volume VI of the Lick Observatory Publications, were reduced with Auwers' corrected places of the 303 Southern Fundamental Stars. The comparison between these places, and the corresponding places in Newcomb's Fundamental Catalogue, is given in the text of Volume VI. Since many of the Piazzi stars are included in the Zodiacal list, the comparison of the two sets of observations will give an indication of the precision of the places in both. The same number of observations were usually made, for both. While the correction to the Poulkova refractions was applied to the earlier observations, the effect is differential, since the Fundamental stars selected lie in the same zone, for both.

The details, by hours of Right Ascension, are given below. Stars employed as fundamental, in either list, have not been included in this comparison. The means at the foot of the table are derived from the summation of all the stars. They will be slightly different from the means of the hourly groups, since these are of varying weight.

The systematic difference in Right Ascension is comparatively large, owing to the difference in the fundamental systems. On page 171 of Volume VI, the difference of 303—Newcomb is derived, both directly, and through the B. J. system. The value there given, $\varDelta \alpha - 0^{s}.029$, is in close agreement with the systematic difference of these observations. On page 173 the observations of the full list of Piazzi stars are compared with Newcomb, with the resulting $\varDelta \alpha - 0^{s}.031$.

The means of the residuals in the hourly groups are given in the table below. In Right Ascension they are much smaller than the average difference of the places, owing to the existence of the systematic difference. In Declination, the differences are mainly accidental, and the mean residual is no smaller than the average difference, taken without regard to sign. Allowing equal weight to both sets of observations, the probable errors of observation in either would be: $\pm 0^{s}.017$ in Right Ascension, and $\pm 0''.21$ in Declination. The effect of magnitude equation, and the effect of graduation error would not be included in these values.

THE PIAZZI STARS IN VOLUME VI—THE ZODIACAL CATALOGUE.

R. A.	Stars.	Decl.	$\Delta\alpha$	Mean v	$\Delta\delta$	Mean v
h		°	s	s	"	"
11.5	8	− 2.6	−0.042	±0.041	−0.09	±0.29
12.5	18	5.2	.049	.025	+ .11	.29
13.5	37	9.3	.028	.036	+ .04	.28
14.5	30	13.5	.022	.027	+ .09	.38
15.5	26	19.1	.023	.021	− .24	.37
16.5	28	22.3	.025	.026	− .06	.39
17.6	34	22.8	.017	.033	− .06	.38
18.5	29	23.0	.020	.022	+ .07	.34
19.5	36	22.0	.032	.022	− .08	.31
20.5	29	17.6	.020	.028	− .01	.40
21.5	43	16.2	.035	.034	+ .04	.34
22.4	29	10.5	.051	.034	+ .11	.44
23.5	19	5.0	.058	.034	+ .29	.24
0.3	11	− 2.9	−0.072	.023	+0.21	.26
Sum	377					
Means .		−15°.5	−0ˢ.032	±0ˢ.029	+0".02	±0".35
Average			±0.043		±0.35	

UNCATALOGUED PIAZZI STARS.

Description. All of the Southern stars of the Catalogue of Piazzi were observed here in the years 1898 to 1900, and the results have been published in Volume VI of the Publications of this Observatory. The original records of Piazzi contain some observations of other stars, not included in his Catalogue, many of them observed more than once. A list of these stars was forwarded to me by Dr. Herman S. Davis, in May, 1902, and observations of as many of them as exist, in the places corresponding to the original records, have been secured here, during the progress of the Zodiacal list. The list, as made out by Dr. Davis, contained 99 stars, some of them observed several times by Piazzi, but occasionally only one coördinate had been determined. Undoubtedly the records contain a number of mistakes, which make it impossible to identify some of the stars. Such stars of the list as are found in the visual Durchmusterung, have been observed here with the Meridian Circle.

An exception was made in the case of the star at $7^h\ 35^m\ 55^s$, where an eighth magnitude star was recorded, 30″ North of the fifth magnitude star P. 185, at Declination — 38° 4′ 42″. The fainter star might have been overlooked in the Durchmusterung, owing to its proximity to the bright one. Instances of this nature were occasionally noted, during the prosecution of our Durchmusterung, at Cordoba. There is, however, no star in close proximity to P. 185, of which one observation is included in this series.

One other case is that of the star at $12^h\ 22^m\ 20^s$, which was observed for the Cordoba General Catalogue. An observation is recorded by Piazzi, preceding this place by fifteen seconds. No star exists there, and the star observed, and listed below, was undoubtedly too faint to have been observed by Piazzi.

With the addition of three more stars, close to stars of the list, the present series contains 87 in all, of which 82 correspond to those of the original list of 99. Each star has been observed twice, fixed circle West; but in two cases of stars at large zenith distance, below — 44° Declination, one of the observations of each was noted as unsatisfactory, and but one determination of each has been retained. The original observations of Piazzi are to be reduced by Dr. Davis.

In general two pairs of Circumpolar stars, and two Nadirs were observed each night. The series beginning May 13, 1902, and ending May 15, 1903, included 380 observations, on sixteen nights, four of which were broken off by clouds. The observations were made alone.

The Fundamental List. The observations have been reduced with Dr. Auwers' corrected places of *303 Stars*, as Fundamental; corresponding to the plan of reduction of the Catalogue of Southern Piazzi stars, in Volume VI.

All of the 62 Fundamental stars employed are contained in the Piazzi Catalogue, thus conforming to the practice, followed here when possible, of selecting standard stars from within the list. The derivation of systematic corrections does not then require the introduction of outside data, with which the places of the original list may possibly have no connection.

The places of the Fundamental stars for 1900.0 are tabulated below, with the proper motions from the same authority. There are also included the observed corrections to the adopted places, and the values of the Latitude derived from each star.

From eight to twelve Fundamental stars were observed with each program, and the observed corrections depend upon the mean of the adopted places of each group. No discussion, depending upon a Right Ascension term, would be possible with these results; and the material, in general, can scarcely be expected to indicate more than the approximate values of the casual errors of the adopted places.

The average observed corrections are: $\pm 0^s.021$, and $\pm 0''.26$, in Right Ascension and Declination, respectively. The average residual from the mean value of the observed latitude, $37^\circ\ 20'\ 26''.17$, is $\pm 0''.34$. Correcting for the latitude variation, the average residual is $\pm 0''.33$, from the mean value φ_0, $26''.15$.

During this series of observations the following values of the Latitude were obtained from the observations of the Circumpolar stars, using Auwers' corrected B. J. Declinations:

U. C., 24 observations of 12 stars,	φ $25''.47$	φ_0 $25''.45$
L. C., 24 observations of 12 stars,	$25\ .91$	$25\ .89$
Means,	$25''.69$	$25''.67$

For five stars, observed at both culminations, the mean value of φ is $25''.58$. The detailed results of the observations of the Circumpolar stars follow later on in this section.

The corrections to the Poulkova Refractions tabulated on page 155 of Volume VI have been applied in these reductions. The quantities in the second part of Table II have been included in the computed Refractions. The use of these corrections has reduced the difference between the Latitudes derived from Circumpolar stars, and that derived from the Southern stars, from $1''.04$ to $0''.48$.

In the extensive series of observations, made upon the stars of the full Piazzi Catalogue, the corresponding difference was made to disappear, by the use of the same corrections to the Poulkova Refractions.

The details of the method of deriving the correction to the Poulkova constant are given in Volume VI. It will be sufficient to repeat here, that they include comparisons of circumpolar observations, with those of Southern stars; in which places for the latter have been taken from Auwers' B. J. list, his 303 list, and his extended Southern Catalogue. Also, comparisons with the Southern Catalogue of Boss, and with that of Newcomb, were included.

Further, all of the three catalogues last mentioned were discussed differentially, in zones extending from the Equator to the Southern limit, —46° Declination. The correction to the Poulkova constant, which may be considered as still subject to further discussion, and for which the material of this Volume has been used also, was found to be -0.004μ, down to —40° Declination, for the usual observing conditions here.

The corrections corresponding to this decrease in the Poulkova constant have been tabulated for this Volume, through the extent to which they may be applied, zenith distance 77°, each side of the zenith, and the table is given immediately after the list of Fundamental stars, in this section. At greater zenith distance, the correction to the refraction must be considerably increased, in order to reconcile our observations with the latest standard star systems. The increase appears to begin sharply at the limit given above, and the correction may be expected to amount to three times the above value, for zenith distances down to 83°. This subject will be more thoroughly discussed in the next plan of observing, fundamental in character.

The mean value of the Latitude in this series, from the Northern and the Southern stars, would be 37° 20′ 25″.93 with the corrected refractions; and 25″.91 without using the corrections. The zenith distances of both groups of stars are very nearly the same, hence the corrections affect the mean result but slightly.

Comparison with Newcomb. The Fundamental places adopted in this series have been compared with those of Newcomb, for the same epoch, for the stars that occur in both. The results are summed up, in the following condensed tabulation, in 10° groups.

Two differences of Declination, exceeding 1″, both in —22°, have been excluded.

AUWERS' 303—NEWCOMB.

	No.	Decl.	$\Delta\alpha$	$\Delta\delta$
		°	s	″
	14	- 6.0	-0.037	-0.07
	10	-15.6	- .021	- .08
	12	-22.2	- .010	- .11
Sum,	36			
		°	s	″
Means,	.	-14.1	-0.024	-0.09
v	.	. . . .	± .015	± .21

The Fundamental stars, from the *303 list*, are between 0° and —24°. The mean of the Declinations is —14°.2, which falls at 51°.6 zenith distance. The selected list contains 62 stars, of which sixty per cent are included in Newcomb's Catalogue.

FUNDAMENTAL STARS: AUWERS' CORRECTED LIST, 303.

Star.	Mag.	R. A. 1900.0.	Decl. 1900.0	Pr. Mo.		Obs. Corr.		φ	No.	φ₀
		h m s	° ′ ″	s	″	s	″	″		″
7 Ceti	4.6	0 9 33.683	−19 29 13.15	−0.0028	−0.063	−0.056	−0.21	26.16	2	26.18
9 Ceti	6.0	0 17 44.349	−12 45 56.90	+ .0257	+ .077	+ .012	− .10	26.05	2	26.07
15 Ceti	6.8	0 32 57.717	− 1 3 12.36	− .0048	− .002	+ .026	− .48	26.43	2	26.45
ε Eridani	3.0	3 28 13.085	− 9 47 48.05	− .0675	+ .020	− .014	− .38	26.62	2	26.47
20 Eridani	5.0	3 31 44.002	−17 47 53.36	+ .0007	− .012	+ .013	+ .25	25.99	2	25.84
53 Eridani	4.0	*4 33 35.981	−14 29 58.16	− .0066	− .162	+ .049	+ .34	25.89	2	25.74
60 Eridani	6.0	4 45 41.145	−16 23 27.17	+ .0018	+ .073	− .061	− .06	26.29	2	26.14
ε Leporis	3.4	5 1 13.648	−22 30 19.38	+ .0011	− .071	+ .001	− .38	26.62	2	26 47
λ Eridani	4.0	5 4 21.596	− 8 52 56.04	− .0013	+ .002	+ .021	− .12	26.36	2	26.21
τ Orionis	4.0	5 12 45.002	− 6 57 8.55	− .0022	+ .012	.000	− .13	26.37	2	26.22
γ Leporis	3.8	5 40 17.648	−22 28 51.57	− .0213	− .376	.000	+ .37	25.98	4	25.82
δ Leporis	3.9	5 47 1.227	−20 53 15.04	+ .0159	− .642	+ .003	+ .06	26.41	2	26.24
10 Monocerotis	5.0	6 23 1.279	− 4 42 0.77	− .0012	+ .027	− .009	− .03	26.50	2	26.33
ξ2 Can. Maj.	5.0	6 30 51.904	−22 53 8.00	+ .0006	+ .013	− .036	+ .31	26.16	2	25.99
29 Can. Maj.	5.3	7 14 30.537	−24 22 34.15	− .0013	+ .011	− .001	+ .04	26.43	3	26.26
e Navis	4.8	7 52 33.521	−22 36 47.19	− .0044	+ .023	+ .018	+ .01	26.31	2	26.14
ι Navis	3.0	8 3 17.092	−24 0 57.43	− .0073	+ .054	+ .028	− .78	27.10	2	26.93
6 Hydræ	6.0	8 35 17.172	−12 7 18.26	− .0078	+ .013	+ .001	− .12	26.44	2	26.27
15 Hydræ	6.0	8 46 39.560	− 6 48 8.72	− .0046	+ .018	− .028	− .43	26.75	2	26.58
κ Hydræ	5.0	9 35 30.706	−13 52 42.56	− .0032	− .002	+ 006	+ .59	25.73	2	25.56
β Crateris	4.1	11 6 44.305	−22 16 47.42	− .0017	− .090	.000	+ .07	26.21	2	26.15
φ Leonis	4.6	11 11 34.652	− 3 6 17.66	− .0080	− .029	+ .014	− .26	26.55	2	26.49
ζ Crateris	5.0	11 39 41.577	−17 47 41.05	+ .0009	− .020	.000	+ .49	25.79	2	25.73
ε Corvi	4.1	12 4 58.813	−22 3 48.91	− .0060	+ .020	+ .001	− .39	26.45	2	26.39
β Corvi	2.4	12 29 7.930	−22 50 37.49	− .0019	− .046	+ .046	+ .13	25.93	2	25.87
χ Virginis	5.0	12 34 5.030	− 7 26 42.70	− .0064	− .017	− .053	+ .34	25.71	2	25.65
53 Virginis	5.4	13 6 44.124	−15 39 33.25	+ .0028	− .291	+ .024	− .02	26.07	2	26.01
γ Hydræ	3.3	13 13 29.003	−22 38 38.69	+ .0037	− .052	− .046	+ .41	25.64	2	25.58
47 Hydræ	5.8	13 52 54.366	−24 29 3.02	− .0048	− .034	− .047	− .69	27.24	2	27.32
κ Virginis	4.3	14 7 33.577	− 9 48 29.80	− .0010	+ .150	− .016	− .18	26.23	2	26.17
ι Virginis	4.0	14 10 46.131	− 5 31 24.30	− .0029	− .417	+ .028	− .53	26.59	2	26.53
2 Libræ	6.3	14 18 2.675	−11 15 26.46	− .0020	− .055	− .027	+ .36	26.18	2	26.26
ι Libræ	4.6	15 6 31.139	−19 24 48.06	− .0048	− .035	+ .001	+ .23	26.31	2	26.39
β Libræ	2.0	15 11 37.449	− 9 0 50.51	− .0079	− .016	− .024	+ .21	26.33	2	26.41
37 Libræ	5.0	15 28 42.657	− 9 43 18.70	+ .0186	− .236	+ .005	− .17	26.72	2	26.80
ε Ophiuchi	3.3	16 13 1.710	− 4 26 55.95	+ .0036	+ .041	+ .053	+ .36	26.18	2	26.26
ψ Ophiuchi	5.0	16 18 14.994	−19 48 12.56	− .0032	− .049	− .022	+ .12	26.42	2	26.50
41 Ophiuchi	5.0	17 11 28.584	− 0 19 56.61	− .0032	− .046	− .003	− .25	26.79	2	26.87
ξ Ophiuchi	5.0	17 15 0.567	−21 0 20.12	+ .0151	− .197	+ .012	− .33	26.88	2	26.96
ξ Serpentis	3.6	17 31 51.573	−15 20 8.49	− .0048	− .058	+ .004	− .10	26.64	2	26.72
μ Sagittarii	4.1	18 7 46.942	−21 5 6.27	− .0019	+ .005	+ .028	+ .13	26.41	2	26.49
η Serpentis	3.0	18 16 8.075	− 2 55 29.51	− .0393	− .686	+ .030	.00	25.86	2	25.97
Br. 2333	6.1	18 32 25.756	−23 35 24.95	− .0028	− .019	+ .022	+ .11	26.43	2	26.51
5 H. Scuti	5.0	18 38 4.467	− 8 22 26.52	− .0002	+ .025	− .055	− .02	25.85	3	25.96
6 H. Scuti	4.6	18 41 52.088	− 4 51 17.48	− .0020	− .007	− .003	− .45	26.28	3	26.39
υ Sagittarii	4.6	19 16 0.012	−16 8 33.85	− .0016	+ .004	+ .003	+ .30	25.53	3	25.64
e Aquilæ	5.3	19 25 26.018	− 2 59 50.43	− .0008	− .001	− .015	+ .08	25.75	3	25.86
M. 811	6.5	19 57 48.759	−22 52 34.59	− .0050	+ .041	− .006	− .42	26.20	2	26.31
4 Capricorni	6.1	20 12 8.918	−21 7 8.21	+ .0001	− .028	+ .004	− .21	25.99	2	26.10
β Capricorni	3.0	20 15 23.580	−15 5 50.06	+ .0007	+ .013	+ .004	− .36	26.14	2	26.25
ρ Capricorni	5.1	20 23 9.429	−18 8 39.40	− .0028	− .008	+ .004	+ .05	25.73	2	25.84
11 Aquarii	6.0	20 55 17.900	− 5 7 0.15	+ .0019	− .139	+ .028	+ .47	25.31	2	25.42
M. 909	6.6	21 53 9.193	−21 39 36.73	− .0002	+ .004	+ .022	+ .20	25.59	1	25.70
M. 911	6.6	21 56 41.616	−18 23 0.93	+ .0054	− .069	+ .024	+ .50	25.28	2	25.39
47 Aquarii	5.7	22 16 5.308	−22 5 58.06	− .0035	− .082	+ .063	− .59	26.51	2	26.53
50 Aquarii	6.2	22 19 5.686	−14 2 10.88	+ .0017	+ .017	− .013	− .10	26.03	2	26.05
Br. 3033	6.7	22 52 6.601	− 5 20 40.09	− .0025	+ .014	− .020	− .31	26.11	2	26.04
h Aquarii	5.9	22 59 56.894	− 8 14 0.60	+ .0066	+ .022	+ .027	+ .11	25.69	2	25.62
b 1 Aquarii	4.3	23 17 43.166	−20 38 47.27	− .0098	− .085	− .071	+ .74	25.29	3	25.31
M. 974	6.5	23 30 22.553	− 8 1 4.49	− .0020	+ .028	+ .023	+ .02	26.01	3	26.03
27 Piscium	5.3	23 53 33.183	− 4 6 38.75	− .0051	− .063	+ .019	+ .14	25.66	2	25.59
2 Ceti	4.3	23 58 37.014	−17 53 33.77	− .0005	− .007	− .004	+ .19	25.68	4	25.66

* R. A. corrected +0ˢ.032, in conformity with Auwers' B. J.

CORRECTIONS TO THE POULKOVA REFRACTIONS. — 0.004 μ.

Decl.	App. Z. D.	Corr.
°	° ′	″
−40	77 16.3	−0.885
39	76 16.6	.819
38	75 16.8	.761
37	74 17.1	.711
36	73 17.3	.666
35	72 17.5	.626
34	71 17.6	.591
33	70 17.8	.559
32	69 17.9	.529
31	68 18.0	.503
−30	67 18.1	−0.478
29	66 18.2	.456
28	65 18.3	.435
27	64 18.4	.416
26	63 18.5	.398
25	62 18.6	.381
24	61 18.7	.366
23	60 18.8	.351
22	59 18.8	.337
21	58 18.9	.324
−20	57 18.9	−0.312
19	56 19.0	.300
18	55 19.1	.289
17	54 19.1	.279
16	53 19.2	.269
15	52 19.2	.259
14	51 19.2	.250
13	50 19.3	.241
12	49 19.3	.233
11	48 19.3	.225
−10	47 19.4	−0.217
9	46 19.4	.210
8	45 19.5	.202
7	44 19.5	.195
6	43 19.5	.188
5	42 19.6	.182
4	41 19.6	.176
3	40 19.6	.170
2	39 19.7	.164
1	38 19.7	.158
0	37 19.7	.153

Decl.	App. Z. D.	Corr.
°	° ″	′
0	37 19.7	−0.153
+1	36 19.7	.147
2	35 19.8	.142
3	34 19.8	.137
4	33 19.8	.132
5	32 19.8	.127
6	31 19.8	.122
7	30 19.9	.117
8	29 19.9	.112
9	28 19.9	.108
+10	27 19.9	−0.103
11	26 19.9	.099
12	25 20.0	.095
13	24 20.0	.090
14	23 20.0	.086
15	22 20.0	.082
16	21 20.1	.078
17	20 20.1	.074
18	19 20.1	.070
19	18 20.1	.066
+20	17 20.1	−0.062
21	16 20.1	.059
22	15 20.2	.055
23	14 20.2	.051
24	13 20.2	.047
25	12 20.2	.044
26	11 20.2	.040
27	10 20.2	.036
28	9 20.3	.033
29	8 20.3	.029
+30	7 20.3	−0.026
31	6 20.3	.022
32	5 20.3	.019
33	4 20.3	.015
34	3 20.4	.012
35	2 20.4	.008
36	1 20.4	.005
37	0 20.4	.001
38	0 39.6	.002
39	1 39.6	.006
40	2 39.6	.009

Decl.	App. Z. D.	Corr.
°	° ′	″
+40	2 39.6	−0.009
41	3 39.6	.013
42	4 39.5	.016
43	5 39.5	.020
44	6 39.5	.023
45	7 39.5	.027
46	8 39.5	.030
47	9 39.4	.034
48	10 39.4	.038
49	11 39.4	.041
+50	12 39.4	−0.045
51	13 39.4	.049
52	14 39.3	.052
53	15 39.3	.056
54	16 39.3	.060
55	17 39.3	.064
56	18 39.3	.067
57	19 39.3	.071
58	20 39.2	.075
59	21 39.2	.079
+60	22 39.2	−0.083
61	23 39.2	.088
62	24 39.2	.092
63	25 39.1	.096
64	26 39.1	.100
65	27 39.1	.105
66	28 39.1	.109
67	29 39.0	.114
68	30 39.0	.118
69	31 39.0	.123
+70	32 39.0	−0.128
71	33 39.0	.133
72	34 38.9	.138
73	35 38.9	.143
74	36 38.9	.149
75	37 38.9	.154
76	38 38.8	.160
77	39 38.8	.166
78	40 38.8	.172
79	41 38.7	.178
80	42 38.7	.184

Decl.	App. Z. D.	Corr.
°	° ′	″
+80	42 38.7	−0.184
81	43 38.7	.191
82	44 38.7	.198
83	45 38.6	.205
84	46 38.6	.212
85	47 38.6	.219
86	48 38.5	.227
87	49 38.5	.235
88	50 38.4	.244
89	51 38.4	.253
90	52 38.3	.262

LOWER CULMINATION.

Decl.	App. Z. D.	Corr.
°	° ′	″
90	52 38.3	−0.262
89	53 38.3	.272
88	54 38.2	.282
87	55 38.2	.293
86	56 38.1	.304
85	57 38.1	.316
84	58 38.0	.328
83	59 38.0	.341
82	60 37.9	.355
81	61 37.8	.370
80	62 37.7	.386
79	63 37.7	−0.403
78	64 37.6	.422
77	65 37.5	.442
76	66 37.4	.463
75	67 37.3	.486
74	68 37.2	.511
73	69 37.0	.538
72	70 36.9	.568
71	71 36.7	.602
70	72 36.6	.639
69	73 36.4	−0.680
68	74 36.2	.726
67	75 35.9	.779
66	76 35.6	.839
65	77 35.3	.909

OBSERVATIONS OF CIRCUMPOLAR STARS, 1902-1903.

Star.	AUWERS' PLACES.		OBS.—A.				
	R. A. 1900.0.	Decl. 1900.0.	R. A.	Decl.	No.	φ	φ_0
U. C.	h m s	° ′ ″	s	″		″	″
43 H. Ceph. . . .	0 55 1.58	85 43 14.51	-0.07	+0.80	2	25.10	25.12
36 H. Cass.	2 28 30.95	72 22 51.14	- .08	+ .65	1	25.06	24.99
Gr. 750	4 5 5.66	85 17 28.61	+ .10	+ .54	2	25.70	25.55
22 H. Cam. . . .	6 7 49.66	69 21 18.53	+ .09	+ .32	2	26.15	25.98
1 H. Draco. . . .	9 22 51.15	81 46 6.87	+ .02	+1.48	2	24.84	24.67
λ Draco.	11 25 28.31	69 52 58.75	+ .01	+ .43	2	25.86	25.80
Gr. 2001	13 23 35.00	72 54 38.43	- .01	- .16	2	26.21	26.15
β Urs. Min. . . .	14 50 59.56	74 33 50.84	- .04	+1.38	2	25.16	25.24
ε Urs. Min. . . .	16 56 12.18	82 12 7.74	.00	+ .81	2	25.73	25.81
ε Draco.	19 48 30.81	70 0 47.32	- .02	+ .63	3	25.20	25.31
β Ceph.	21 27 22.27	70 7 17.78	.00	+ .80	2	24.97	25.08
24 Ceph.	22 7 53.16	71 50 54.46	+ .06	+ .29	2	25.63	25.66
					Means,	25.47	25.45
L. C.	h m s	° ′ ″	s	″		″	″
43 H. Ceph. . . .	0 55 1.58	85 43 14.51	-0.43	-0.43	2	25.62	25.56
36 H. Cass. . . .	2 28 30.95	72 22 51.14	- .06	- .97	2	25.57	25.65
Gr. 750	4 5 5.66	85 17 28.61	+ .18	-1.40	2	25.14	25.22
22 H. Cam. . . .	6 7 49.66	69 21 18.53	- .07	- .29	3	25.54	25.65
Br. 1147	8 6 59.13	76 3 44.12	+ .09	+1.03	2	26.12	26.22
9 H. Draco. . . .	10 26 36.23	76 13 41.48	+ .02	+ .41	2	26.34	26.37
λ Draco.	11 25 28.31	69 52 58.75	+ .02	+ .12	2	26.07	26.09
4 Urs. Min. . . .	14 9 13.94	78 1 2.53	- .08	- .44	1	25.27	25.20
19 Urs. Min. . . .	16 13 40.19	76 7 45.76	+ .09	+ .64	2	26.88	26.73
35 Draco.	17 53 55.49	76 58 33.95	+ .09	- .13	2	26.34	26.17
Br. 2777	21 7 30.25	77 43 14.95	+ .02	- .96	2	25.36	25.19
γ Ceph.	23 35 14.40	77 4 27.01	+ .01	+ .45	2	26.74	26.68
					Means,	25.91	25.89

Individual Observations. The details of the observations which follow require no special description. The Fundamental stars are given in order of Right Ascension, along with the stars to be determined. The observed value of the Latitude is given for each Fundamental star, with the value corrected for latitude variation, according to Chandler's formula.

The numbers in the following pages are from the current working list. The observations of magnitude are included. The probable errors of these observations have been computed, from the differences of two observations in the same position. The stars have been divided into groups, to exhibit the effect of large zenith distance.

Stars.	Decl.	Mean	Z. D.	R. A.	One obs.	Decl.
	°	°	°	s		″
53	— 3 to — 20	— 11.6	49	± 0.024		± 0.22
14	— 20 to — 30	— 24.3	62	.022		.24
13	— 30 to — 40	— 34.5	72	.029		.38
Sum, 80		Mean, — 17.3	56	0.025 = ^{s}.023 sec δ		0.25

The remaining stars have either one observation only, or three. The corresponding results, for the Fundamental stars, are:

51 stars 0° to — 24° Mean, — 14°.2 R. A., ± 0ˢ.019 Decl., ± 0″.21

No. 1.

1902.	Mag.	h m s	° ′ ″
Oct. 17	7¾	0 4 3.855	−35 38 12.24
27	7¾	3.951	13.76
		3.903	13.00

No. 2. S. fol.

1902.			
Oct. 17	8	0 6 33.289	− 3 37 22.94
27	8¼	33.334	22.68
		33.311	22.81

9 mag. N. prec. 11ˢ

7 Ceti.

1902.			
Oct. 17		0 9 39.684	−19 28 33.19
27		39.767	33.75
		39.726	33.47
Obs. Lat.			37 20 26.16
Red. Lat.			26.18

9 Ceti.

1902.			
Oct. 17		0 17 50.495	−12 45 16 91
27		50.570	16.70
		50.532	16.80
Obs. Lat.			37 20 26.05
Red. Lat.			26.07

No. 3.

1902.			
Oct. 17	7¼	0 24 38.008	− 3 22 52.81
27	7	38.084	52.17
		38.046	52.49

No. 4.

1902.			
Oct. 17	8¼	0 28 37.905	− 3 16 32.10
27	8¼	37.849	32.28
		37.877	32.19

15 Ceti.

1902.			
Oct. 17		0 33 3.882	− 1 2 33.44
27		3.855	32.88
		3.868	33.16
Obs. Lat.			37 20 26.43
Red. Lat.			26.45

No. 5.

1902.			
Oct. 17	8	0 38 5.309	−11 1 57.77
27	8¼	5.320	57.92
		5.314	57.84

ε Eridani.

1903.			
Jan. 12		3 28 21.567	− 9 47 11.61
13		21.511	11.20
		21.539	11.40
Obs. Lat.			37 20 26.62
Red. Lat.			26.47

20 Eridani.

1903.	Mag.	h m s	° ′ ″
Jan. 12		3 31 52.201	−17 47 16.67
13		52.216	17.13
		52.208	16.90
Obs. Lat.			37 20 25.99
Red. Lat.			25.84

No. 6.

1903.			
Jan. 12	7¼	3 36 47.993	−28 16 52.02
13		47.992	53.26
		47.992	52.64

53 Eridani.

1903.			
Jan. 12		4 33 44.260	−14 29 35.89
13		44.268	36.46
		44.264	36.18
Obs. Lat.			37 20 25.89
Red. Lat.			25.74

60 Eridani.

1903.			
Jan. 12		4 45 49.206	−16 23 7.61
13		49.174	8.12
		49.190	7.86
Obs. Lat.			37 20 26.29
Red. Lat.			26.14

No. 7.

1903.			
Jan. 12	7	4 55 39.894	−32 23 8.06
13	7	39.910	8.71
		39.902	8.39

ε Leporis.

1903.			
Jan. 12		5 1 21.240	−22 30 4.59
13		21.289	4.88
		21.264	4.73
Obs. Lat.			37 20 26.62
Red. Lat.			26.47

λ Eridani.

1903.			
Jan. 12		5 4 30.230	− 8 52 41.92
13		30.216	41.50
		30.223	41.71
Obs. Lat.			37 20 26.36
Red. Lat.			26.21

τ Orionis.

1903.			
Jan. 12		5 12 53.771	− 6 56 56.41
13		53.700	56.29
		53.735	56.35
Obs. Lat.			37 20 26.37
Red. Lat.			26.22

No. 8.

1903.	Mag.	h m s	° ′ ″
Jan. 12	6¾	5 25 39.524	− 7 30 35.80
13	6¾	39.485	35.50
		39.504	35.65

No. 9.

1903.			
Jan. 12	6	5 29 35.467	−38 34 51.46
13	6	35.503	52.91
		35.485	52.19

No. 10.

1903.			
Feb. 24	7½	5 30 31.428	− 6 5 47.46
25	7¾	31.336	47.54
		31.382	47.50

Bright pair precede 14ˢ

γ Leporis.

1903.			
Jan. 12		5 40 25.086	−22 28 47.58
13		.186	46.66
Feb. 24		.173	47.41
25		.144	47.19
		25.147	47.21
Obs. Lat.			37 20 25.98
Red. Lat.			25.82

No. 11.

1903.			
Jan. 12	6½	5 43 45.757	− 4 7 15.08
13	6½	45.739	15.00
		45.748	15.04

δ Leporis.

1903.			
Feb. 24		5 47 8.984	−20 53 13.64
25		8.957	13.60
		8.970	13.62
Obs. Lat.			37 20 26.41
Red. Lat.			26.24

No. 12.

1903.			
Jan. 12	7	5 47 10.322	−37 38 53.81
13	7¼	10.415	54.90
		10.369	54.36

No. 13.

1903.			
Jan. 12	7¼	5 54 1.664	−44 1 19.19
13		1.618	20.85
		1.641	20.02

No. 14.

1903.			
Feb. 25	8½	6 3 26.390	−45 48 10.37

No. 15.

1903.	Mag.	h	m	s	°	′	″
Feb. 24	8½	6	12	23.165	− 7	47	36.32
25	8½			23.195			35.62
				23.180			35.97

No. 16.

1903.							
Feb. 24	8	6	19	35.196	−30	53	43.08
25	8¼			35.192			42.79
				35.194			42.93

10 Monoc.

1903.							
Feb. 24		6	23	10.158	− 4	42	6.90
25				10.155			6.65
				10.157			6.77
Obs. Lat.					37	20	26.50
Red. Lat.							26.33

ζ 2 Can. Maj.

1903.							
Feb. 24		6	30	59.436	−22	53	15.74
25				59.384			15.73
				59.410			15.74
Obs. Lat.					37	20	26 16
Red. Lat.							25.99

No. 17.

1903.							
Feb. 24	8½	6	43	40.801	−22	3	45.34
25	8½			40.729			45.63
				40.765			45.49

Anon. N. pr.

1903.							
Feb. 24	8¾	7	3	31.247	−26	11	6.64

No. 18 S. fol.

1903.							
Feb. 25		7	3	39.057	−26	12	24.52
Mar. 9	8½			39.142			24.79
				39.100			24.66

29 Can. Maj.

1903.							
Feb. 24		7	14	38.003	−24	22	53.75
25				.063			53.64
Mar. 9				.019			52.53
				38.028			53.31
Obs. Lat.					37	20	26.43
Red. Lat.							26.26

No. 19.

1903.							
Feb. 24	7	7	17	56.943	−16	7	35.66
25	7			56.953			35.69
				56.948			35.67

No. 20.

1903.	Mag.	h	m	s	°	′	″
Feb. 24	8	7	31	32.710	−25	56	23 63
25	8¼			32.631			21.94
				32.670			22.78

No. 21.

1903.							
Feb. 25	5	7	36	2.310	−38	5	7.33

No other star.

e Navis.

1903.							
Feb. 25		7	52	41.288	−22	37	15.20
Mar. 9				41.273			15.80
				41.280			15.50
Obs. Lat.					37	20	26.31
Red. Lat.							26.14

No. 22.

1903.							
Feb. 25	8¼	7	57	10.388	−32	5	37.30
Mar. 9	8¼			10.310			36.84
				10.349			37.07

ι Navis.

1903.							
Feb. 25		8	3	24.797	−24	1	28.77
Mar. 9				24.766			28.98
				24.781			28.87
Obs. Lat.					37	20	27.10
Red. Lat.							26.93

6 Hydræ.

1903.							
Feb. 25		8	35	25.687	−12	7	55.81
Mar. 9				25.706			56.34
				25.696			56.07
Obs. Lat.					37	20	26.44
Red. Lat.							26.27

No. 23.

1903.							
Feb. 25	7¾	8	43	0.480	−13	10	12.99
Mar. 9	7¾			0.366			13.22
				0.423			13.10

3′ S. fol. 12^s

15 Hydræ.

1903.							
Feb. 25		8	46	48.387	− 6	48	49.14
Mar. 9				48.368			49.06
				48.378			49.10
Obs. Lat.					37	20	26.75
Red. Lat.							26.58

No. 24.

1903.							
Feb. 25	8½	9	17	27.574	−25	46	7.55
Mar. 9	8½			27.546			7.42
				27.560			7.49

κ Hydræ.

1903.	Mag.	h	m	s	°	′	″
Feb. 25		9	35	39.332	−13	53	31.13
Mar. 9				39.339			30.02
				39.335			30.58
Obs. Lat.					37	20	25.73
Red. Lat.							25.56

No. 25.

1903.							
Mar. 9	(9)	9	40	56.168	−44	25	56.74

β Crateris.

1903.							
Apr. 29		11	6	53.137	−22	17	46.30
30				53.142			46.07
				53.139			46.19
Obs. Lat.					37	20	26.21
Red. Lat.							26.15

φ Leonis.

1903.							
Apr. 29		11	11	43.826	− 3	7	16.68
30				43.796			17.01
				43.811			16.84
Obs. Lat.					37	20	26.55
Red. Lat.							26.49

No. 26.

1903.							
Apr. 29	8	11	16	16.522	−13	33	4.62
30				16.547			4.35
				16.534			4.49

No. 27.

1903.							
Apr. 29	8	11	18	40.280	−17	5	17.21
30				40.297			17.13
				40.289			17.17

ζ Crateris.

1903.							
Apr. 29		11	39	50.688	−17	48	40.29
30				50.681			40.80
				50.684			40.55
Obs. Lat.					37	20	25.79
Red. Lat.							25.73

ε Corvi.

1903.							
Apr. 29		12	5	8.062	−22	4	49.70
May 5				8.034			49.05
				8.048			49.37
Obs. Lat.					37	20	26.45
Red. Lat.							26.39

No. 28.

1903.							
May 5	10	12	22	30.333	−25	14	49.29

β Corvi.

1903.	Mag.	h	m	s	°	′	″
Apr. 29		12	29	17.397	−22	51	37.33
May 5				17.407			37.01
				17.402			37.17
Obs. Lat.					37	20	25.93
Red. Lat.							25.87

χ Virg.

1903.							
Apr. 29		12	34	14.274	− 7	27	41.96
May 5				14.229			41.86
				14.252			41.91
Obs. Lat.					37	20	25.71
Red. Lat.							25 65

No. 29.

1903.							
Apr. 29	7¾, 8¼	12	40	17.905	− 3	21	27.01
May 5	7¾, 8¼			17.863			27.55
				17.884			27.28

S. fol. 1^s.2

53 Virg.

1903.							
Apr. 29		13	6	53.697	−15	40	31.93
May 5				53.702			31.79
				53.699			31.86
Obs. Lat.					37	20	26.07
Red. Lat.							26.01

γ Hydræ.

1903.							
Apr. 29		13	13	38.663	−22	39	35.41
May 5				38.767			35.67
				38.715			35.54
Obs. Lat.					37	20	25.64
Red. Lat.							25.58

No. 30.

1903.							
Apr. 29	7½	13	29	18.308	−12	50	58.32
May 5	7¼			18.340			58.07
				18.324			58.20

No. 31.

1903.							
Apr. 29	8½	13	33	28.164	− 7	6	35.53
May 5	8½			28.210			35.86
				28.187			35.70

47 Hydræ.

1902.							
June 18		13	53	1.047	−24	29	38.61
19				1.011			39.66
				1.029			39.13
Obs. Lat.					37	20	27.24
Red. Lat.							27.32

No. 32.

1903.	Mag.	h	m	s	°	′	″
Apr. 29	6¾	13	53	54.190	− 6	27	5.34
May 5	6½			54.187			5.09
				54.189			5.21

No. 33.

1902.							
June 18	8¼	14	2	16.098	− 9	51	24.53
19	8¼			16.089			25.23
				16.093			24.88

No. 34.

1903.							
Apr. 29	7½, 8½	14	2	50.002	−12	27	50.98
May 5	7¾, 8½			49.969			52.20
				49.986			51.59

S. fol. dup.

No. 35.

1902.							
June 18	8	14	5	0.915	−13	45	15.55
19	8¼			0.942			15.15
				0.929			15.35

κ Virg.

1903.							
Apr. 29		14	7	43.152	− 9	49	20.44
May 5				43.135			20.64
				43.143			20.54
Obs. Lat.					37	20	26.23
Red. Lat.							26.17

No. 36.

1902.							
June 18	8¼	14	8	33.918	−19	44	55.79
19	8¼			33.916			55.87
				33.917			55.83

ι Virg.

1903.							
Apr. 29		14	10	55.572	− 5	32	16.71
May 5				55.582			16.96
				55.577			16.83
Obs. Lat.					37	20	26.59
Red. Lat.							26.53

2 Libræ.

1902.							
June 18		14	18	9.062	−11	15	59.58
19				9.118			58.98
				9.090			59.28
Obs. Lat.					37	20	26.18
Red. Lat.							26.26

No. 37.

1902.							
June 18	7	14	33	19.848	−22	53	15.81
19	7			19.822			16.29
				19.835			16.05

No. 38.

1902.	Mag.	h	m	s	°	′	″
June 18	8¼	15	3	38.944	− 5	47	0.00
19	8¼			38.932			0.29
				38.938			0.14

ι Libræ.

1902.							
June 18		15	6	37.955	−19	25	15.39
19				37.964			15.51
				37.959			15.45
Obs. Lat.					37	20	26.31
Red. Lat.							26.39

β Libræ.

1902.							
June 18		15	11	43.879	− 9	1	17.31
19				43.853			17.12
				43.866			17.20
Obs. Lat.					37	20	26.33
Red. Lat.							26.41

No. 39.

1902.							
June 18	7	15	20	1.163	−36	15	8.21
19	7			1.123			8.75
				1.143			8.48

37 Libræ.

1902.							
June 18		15	28	49.221	− 9	43	44.07
19				49.211			44.02
				49.216			44.04
Obs. Lat.					37	20	26.72
Red. Lat.							26.80

No. 40.

1902.							
June 18	8¾	15	57	46.216	−26	43	25.64
19	8¾			46.203			25.25
				46.210			25.44

No. 41.

1902.							
June 18	7½	16	10	7.000	−19	49	47.52
19	7¾			6.959			47.70
				6.980			47.61

ε Oph.

1902.							
June 18		16	13	8.107	− 4	27	13.43
19				8.101			13.63
				8.104			13.53
Obs. Lat.					37	20	26.18
Red. Lat.							26.26

ψ Oph.

1902.							
June 18		16	18	21.961	−19	48	30.08
19				21.997			29.45
				21.979			29.77
Obs. Lat.					37	20	26.42
Red. Lat.							26.50

No. 42.

1902.	Mag.	h m s	° ′ ″
June 18	7¼	16 39 11.512	− 33 40 1.65
19	7	11.467	1.53
		11.490	1.59

No. 43.

1902.			
June 18	7½	17 5 22.520	− 16 30 38.69
19	7½	22.439	39.43
		22.480	39.06

41 Oph.

1902.			
June 18		17 11 34.739	− 0 20 5.37
19		34.727	5.41
		34.733	5.39
Obs. Lat.			37 20 26.79
Red. Lat.			26.87

ξ Oph.

1902.			
June 18		17 15 7.787	− 21 0 28.67
19		7.750	28.86
		7.768	28.76
Obs. Lat.			37 20 26.88
Red. Lat.			26.96

No. 44.

1902.			
June 18	7½	17 24 7.604	− 37 21 32.76
19	7½	7.643	32.88
		7.623	32.82

ξ Serp.

1902.			
June 18		17 31 58.399	− 15 20 13.64
19		58.478	13.64
		58.438	13.64
Obs. Lat.			37 20 26.64
Red. Lat.			26.72

No. 45.

1902.			
June 18	8¼	17 38 37.394	− 27 11 8.69
19	8	37.386	8.44
		37.390	8.56

No. 46.

1902.			
June 18	6	17 46 47.648	− 34 42 25.23
19	6¼	47.716	25.44
		47.682	25.33

No. 47.

1902.			
June 18	7¼	17 50 8.764	− 30 10 52.55
19	7¼	8.762	52.38
		8.763	52.47

μ Sagit.

1902.	Mag.	h m s	° ′ ″
June 18		18 7 54.140	− 21 5 4.69
19		54.143	4.83
		54.141	4.76
Obs. Lat.			37 20 26.41
Red. Lat.			26.49

η Serp.

1902.			
Aug. 11		18 16 14.286	− 2 55 28.44
12		14.283	28.49
		14.284	28.46
Obs. Lat.			37 20 25.86
Red. Lat.			25.97

Anon.

1902.			
June 18	8½	18 17 26.322	− 19 45 5.83
19		26.276	6.23
		26.299	6.02

No. 48.

1902.			
June 18		18 18 50.308	− 19 47 4.02
19	7¾	50.262	4.42
		50.285	4.22

No. 49.

1902.			
Aug. 11	8¾	18 19 47.500	− 21 5 30.56
Aug. 12	8¾	47.528	30.21
		47.514	30.39

No. 50.

1902.			
June 18	9	18 23 54.936	− 19 40 8.59
19	8¾	54.915	9.07
		54.926	8.83

No. 51.

1902.			
Aug. 11	7¾	18 24 0.097	− 21 0 56.24
12	7¾	0.033	56.16
		0.065	56.20

No. 52.

1902.			
June 18	8	18 26 41.488	− 19 31 20.76
19	8¼	41.423	20.64
		41.456	20.70

N. fol.

No. 53.

1902.			
Aug. 11	7¼	18 28 37.060	− 19 51 31.92
12	7¼	37.103	32.70
		37.081	32.31

No. 54.

1902.	Mag.	h m s	° ′ ″
June 18	8½	18 29 11.391	− 19 36 30.46
19	8½	11.371	30.51
		11.381	30.49

Anon.

1902.			
Aug. 11	8	18 31 26.751	− 19 29 10.63

No. 55.

1902.			
Aug. 12	7	18 31 40.754	− 19 30 23.41
19	7¼	40.625	23.14
		40.690	23.28

S. fol.

Br. 2333.

1902.			
June 18		18 32 33.095	− 23 35 19.31
19		33.052	19.12
		33 073	19.22
Obs. Lat.			37 20 26.43
Red. Lat.			26.51

5 H. Scuti.

1902,			
Aug. 11		18 38 10.956	− 8 22 19.97
12		.948	20.15
19		.930	19.38
		10.945	19.83
Obs. Lat.			37 20 25.85
Red. Lat.			25.96

6 H. Scuti.

1902.			
Aug. 11		18 41 58.442	− 4 51 10.87
12		.431	10.98
19		.475	10.14
		58.449	10.66
Obs. Lat.			37 20 26.28
Red. Lat.			26.39

No. 56.

1902.			
Aug. 11	8	18 46 48.759	− 28 15 45.79
12	8	48.696	45.96
		48.728	45.88

No. 57.

1902.			
Aug. 11		18 48 1.263	− 19 55 1.20
12	7¼	1.213	1.24
		1.238	1.22

No. 58.

1902.			
Aug. 11		18 54 49.265	− 19 47 38.59
12	7	49.222	38.40
		49.243	38.50

No. 59.

1902.	Mag.	h m s	° ′ ″
Aug. 11		19 1 24.242	−18 53 19.68
12	7	24.164	19.45
		24.203	19.57

No. 60.

1902.			
Aug. 12	7½	19 7 51.946	−14 36 39.80
19	7½	51.955	39.60
		51.950	39.75

υ Sagit.

1902.			
Aug. 11		19 16 6.920	−16 8 20.30
12		.909	20.77
19		.836	20.36
		6.888	20.48
Obs. Lat.			37 20 25.53
Red. Lat.			25.64

No. 61.

1902.			
Aug. 11		19 20 28.094	
12	7	.103	−22 8 4.80
19	7¾	.086	4.51
		28.094	4.66

e Aquilæ.

1902.			
Aug. 11		19 25 32.276	− 2 59 35.51
12		.273	36.04
19		.283	35.68
		32.277	35.74
Obs. Lat.			37 20 25.75
Red. Lat.			25.86

No. 62.

1902.			
Aug. 12	8½	19 30 4.128	−21 8 12.81
19	8½	4.098	11.95
		4.113	12.38

No. 63.

1902.			
Aug. 12	8	19 41 22.997	−20 7 10.38
19	8	22.946	10.21
		22.971	10.30

No. 64.

1902.			
Aug. 12	7¾	19 51 57.861	− 1 14 54.73
19	7¾	57.940	55.58
		57.900	55.16

M. 811.

1902.			
Aug. 12		19 57 55.853	−22 52 15.10
19		55.882	15.27
		55.868	15.18
Obs. Lat.			37 20 26.20
Red. Lat.			26.31

4 Capric.

1902.	Mag.	h m s	° ′ ″
Aug. 12		20 12 15.950	−22 6 46.09
19		16.006	47.16
		15.978	46.62
Obs. Lat.			37 20 25.99
Red. Lat.			26.10

β Capric.

1902.			
Aug. 12		20 15 30 334	−15 5 27.83
19		30.326	28.25
		30.330	28.04
Obs. Lat.			37 20 26.14
Red. Lat.			26.25

ρ Capric.

1902.			
Aug. 12		20 23 16.287	−18 8 15.64
19		16.275	16.16
		16.281	15.90
Obs. Lat.			37 20 25.73
Red. Lat.			25.84

No. 65.

1902.			
Aug. 12	7¼	20 42 51.881	−18 33 44.98
19	7¼	51.934	45.73
		51.908	45.36

S. fol.

No. 66.

1902.			
Aug. 12	8¾	20 51 41.286	−16 5 32.27
19	8¾	41.286	32.39
		41.286	32.33

11 Aquarii.

1902.			
Aug. 12		20 55 24.234	− 5 6 31.97
19		24.269	32.55
		24.251	32.26
Obs. Lat.			37 20 25.31
Red. Lat.			25.42

No. 67.

1902.			
Aug. 12	7¼	21 6 47.907	− 6 12 54.06
19	7½	47.956	54.32
		47.931	54.19

N. fol.

No. 68.

1902.			
Aug. 12		21 19 32.996	− 6 0 5.58
19	7¼	32.947	6.00
		32.971	5.79

No. 69.

1902.	Mag.	h m s	° ′ ″
Aug. 12	8¼	21 21 52.476	− 6 54 12.23
19	8¼	52.512	12 07
		52.494	12.15

No. 70.

1902.			
Aug. 12	8	21 46 22.689	− 2 42 4.15
19	7¾	22.704	3.74
		22.697	3.94

No. 71.

1902.			
Aug. 12	8	21 49 45.496	−12 26 1.10
19	8	45.405	0.86
		45.450	0.98

M. 909.

1902.			
Aug. 19		21 53 15.918	−21 39 2.40
Obs. Lat.			37 20 25.59
Red. Lat.			25.70

M. 911.

1902.			
Aug. 12		21 56 48.275	−18 22 26.24
19		48.233	26.10
		48.254	26.17
Obs. Lat.			37 20 25.28
Red. Lat.			25.39

47 Aquarii.

1902.			
Oct. 16		22 16 11.954	−22 5 22.88
17		12.011	22.75
		11.982	22.82
Obs. Lat.			37 20 26.51
Red. Lat.			26.53

50 Aquarii.

1902.			
Oct. 16		22 19 12.127	−14 1 34.46
17		12.075	34.84
		12.101	34.65
Obs. Lat.			37 20 26.03
Red. Lat.			26.05

No. 72.

1902.			
Oct. 16	8¾	22 36 15 814	− 8 23 57.31
17	8¾	15.775	57.78
		15.794	57.54

No. 73.

1902.			
Oct. 16	8	22 43 15.150	− 8 37 47.27
17	8	15.137	46.54
		15 143	46.90

No. 74.

1902.		Mag.	h	m	s	°	′	″
Oct.	16	8½	22	46	4.285	- 9	50	38.90
	17	8¼			4.244			38.53
					4.264			38.71

No. 75.

1902.								
Oct.	16	8¼	22	50	39.777	- 8	20	38.26
	17	8¼			39.727			38.15
					39.752			38.20

Br. 3033.

1902.								
Dec.	2		22	52	12.752	- 5	20	1.98
	6				12.832			2.02
					12.792			2.00
Obs. Lat.						37	20	26.11
Red. Lat.								26.04

No. 76.

1902.								
Oct.	16		22	57	5.163	- 8	15	1.98
	17	8¼			5.071			1.80
					5.117			1.89

h Aquarii.

1902.								
Dec.	2		23	0	3.222	- 8	13	21.50
	6				3.151			21.87
					3.186			21.69
Obs. Lat.						37	20	25.69
Red. Lat.								25.62

No. 77.

1902.								
Oct.	17	9	23	1	8.012	-44	1	59.91
	27	8¾			8.102			57.77
					8.057			58.84

No. 78.

1902.		Mag.	h	m	s	°	′	″
Oct.	17	9	23	4	11.912	- 9	43	4.44
	27	9			12.024			4.64
					11.968			4.54

No. 79.

1902.								
Dec.	2	7¾	23	5	18.418	- 8	20	24.05
	6	7¾			18.362			24.16
					18.390			24.10

No. 80.

1902.								
Oct.	16	9	23	5	47.354	- 9	9	17.70
	17	8¾			47.322			17.05
					47.338			17.38

b₁ Aquarii.

1902.								
Oct.	16		23	17	49.435	-20	38	7.85
	17				.388			6.55
	27				.368			7.60
					49.397			7.33
Obs. Lat.						37	20	25.29
Red. Lat.								25.31

M 974.

1902.								
Oct.	16		23	30	28.726	- 8	0	24.32
	17				.756			24.81
	27				.809			24.74
					28.764			24.62
Obs. Lat.						37	20	26.01
Red. Lat.								26.03

No. 81.

1902.		Mag.	h	m	s	°	′	″
Oct.	17	8½	23	36	11.652	- 3	24	7.97
	27	8½			11.733			7.51
					11.692			7.74

No. 82.

1902.								
Oct.	17	6½	23	40	55.523	-19	13	22.69
	27	6			55.519			23.29
					55.521			22.99

No. 83.

1902.								
Oct.	27	8	23	46	8.248	- 3	3	51.98
Dec.	2	8½			.244			52.32
	6	8			.170			51.92
					8.221			52.07

27 Pisc.

1902.								
Dec.	2		23	53	39 341	- 4	5	58.48
	6				39.335			58.93
					39.338			58.70
Obs. Lat.						37	20	25.66
Red. Lat.								25.59

No. 84.

1902.								
Oct.	17	7¼	23	54	29.833	- 3	23	23.26
	27	7¼			29.834			22.09
					29.833			22.68

2 Ceti.

1902.								
Oct.	17		23	58	43.205	-17	52	53.33
	27				.152			53.38
Dec.	2				.140			54.08
	6				.137			53.20
					43.159			53.50
Obs. Lat.						37	20	25.68
Red. Lat.								25.66

Catalogue of Extra Piazzi Stars. The results of this series of observations have been reduced to the epoch 1900. Except in the cases noted in the last column, each star has been observed twice, fixed circle West. Some cases of suspected proper motion are also noted. No proper motions have been included in the reductions.

The number of the star gives the hour, minute and second of Right Ascension, for the Piazzi epoch, 1800. The observed magnitude is given. The Precessions have been computed with the Struve-Peters constants for 1900:

$$m = 3^s.0727, \; n = 20''.052.$$

The stars range in Declination from $-3°$ to $-45°$. The mean Declination is $-18°.7$.

CATALOGUE OF EXTRA PIAZZI STARS.

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Notes.
			h m s	s	° ′ ″	″	
235852	7.7	1902.81	0 3 57.791	3.056	−35 38 53.10	+20.05	
000120	8.1	02.81	0 6 27.170	3.070	− 3 38 2.90	20.04	
1925	7.1	02.81	0 24 31.918	3.064	− 3 23 32.36	19.94	
2326	8.3	02.81	0 28 31.751	3.063	− 3 17 11.98	19.90	
3255	8.1	02.81	0 37 59.255	3.030	−11 2 37.39	19.78	
033232	7.3	03.03	3 36 40.524	2.489	−28 17 27.84	11.74	
45147	7.0	03.03	4 55 33.128	2.258	−32 23 25.07	5.56	
52041	6 7	03.03	5 25 30.809	2.898	− 7 30 44.65	3.01	
52605	6.0	03.03	5 29 29.438	2.016	−38 35 0.16	2.66	Pr. Mo. R. A. (?)
52527	7.6	03.15	5 30 22.589	2.931	− 6 5 55.24	2.59	(Pair: 6 and 5 N. p. 14^s)
053840	6.5	03.03	5 43 36.818	2.977	− 4 7 19.32	1.43	Pr. Mo. Decl. (?)
54340	7.1	03.03	5 47 4.239	2.043	−37 38 57.74	1.13	
55056	7.3	03.03	5 53 56.297	1.781	−44 1 21.60	+ 0.53	Pr. Mo. R. A. (?)
60031	8.5	03.15	6 3 21.296	1.698	−45 48 9.48	− 0.29	1 obs.
60725	8.5	03.15	6 12 14.510	2.890	− 7 47 32.76	1.07	
061540	8.1	03.15	6 19 28.357	2.276	−30 53 37.81	1.70	
63920	8.5	03.15	6 43 33.143	2.541	−22 3 34.12	3.79	
. .	8.7	03.15	7 3 23.926	2.440	−26 10 50.20	5.48	N. p. 1 obs.
65930	8.5	03.17	7 3 31.780	2.440	−26 12 8.19	5.49	S. f. 2 obs.
71320	7.0	03.15	7 17 48.823	2.708	−16 7 15.64	6.68	
072718	8.1	03.15	7 31 25.249	2.474	−25 55 59.41	7.79	
P 185	5.	03.15	7 35 55.963	2.116	−38 4 42.87	8.15	1 obs. No other star.
75310	8.3	03.17	7 57 3.324	2.342	−32 5 7.65	9.80	
83808	7.7	03.17	8 42 51.916	2.836	−13 9 33.85	13.08	3′ S. f. 12^s
91254	8.5	03.17	9 17 19.603	2.652	−25 45 21.85	15.21	
93653	(8)	03.19	9 40 49.192	2.325	−44 25 7.33	16.47	1 obs.
111106	8.0	03.33	11 16 7.500	3.011	−13 32 5.43	19.69	
111332	8.0	03.33	11 18 31.292	2.999	−17 4 20.00	19.73	
C.G.C.	10.	03.33	12 22 20.931	3.134	−25 13 49.42	19.96	1 obs.
123501	7.7	03.33	12 40 8.625	3.086	− 3 20 28.04	19.75	S. f. 1^s.2 (8¼ N. pr.)
132351	7.4	03.33	13 29 8.759	3.188	−12 50 2.54	18.55	
132804	8.5	03.33	13 33 18.771	3 139	− 7 5 40.46	18.41	
134831	6.6	03.33	13 53 44.756	3.144	− 6 26 12.31	17.63	
135652	8.2	02.46	14 2 9.712	3.191	− 9 50 50.34	17.27	
135719	7.6	03.33	14 2 40.317	3.223	−12 26 59.85	17.25	S. f. (8½ N. pr.)
135930	8.1	02.46	14 4 54.445	3.242	−13 44 41.06	17.15	
140300	8.2	02.46	14 8 27.262	3.328	−19 44 21.86	16.98	
142732	7.0	02.46	14 33 12.990	3.422	−22 52 44.59	15.74	
145816	8.3	02.46	15 3 32.598	3.170	− 5 46 32.23	13.96	
151333	7.0	02.46	15 19 53.497	3.823	−36 14 42.69	12.90	
153130	8.8	02.46	15 57 38.906	3.652	−26 43 5.04	10.20	
160411	7.7	02.46	16 9 59.980	3.500	−19 49 29.10	9.26	
163234	7.1	02.46	16 39 3.674	3.908	−33 39 47.73	6.93	
165930	7.5	02.46	17 5 15.565	3.458	−16 30 29 54	4.74	
171710	7.5	02.46	17 23 59.462	4.081	−37 21 26.55	3.14	
173215	8.1	02.46	17 38 29.877	3.756	−27 11 4.82	1.88	
174000	6.1	02.46	17 46 39.688	3.997	−34 42 23.01	1.17	
174335	7.3	02.46	17 50 1.064	3.849	−30 10 50.73	− 0.87	
. .	8.5	02.46	18 17 19.196	3.551	−19 45 9.07	+ 1.52	N. p.
181248	7.8	02.46	18 18 43.181	3.552	−19 47 7.50	1.64	S. f.
181342	9.0	02.61	18 19 40.341	3.586	−21 5 33.84	1.72	N. f. 3$''$ dup.
181753	8.9	02 46	18 23 47.830	3.548	−19 40 13.00	2.08	S. f. 69^s
181754	7.7	02.61	18 23 52.898	3.583	−21 1 0.38	2.09	
182040	8.1	02.46	18 26 34.369	3.543	−19 31 25.35	2.32	N. f.
182233	7.3	02.61	18 28 29.978	3.552	−19 51 37.29	2.49	
182312	8.5	02.46	18 29 4.291	3.545	−19 36 35.57	2.54	
. .	8.0	02.61	18 31 19.668	3.541	−19 29 16.10	2.73	N. p. 1 obs.
182540	7.1	02.62	18 31 33.606	3.542	−19 30 28.80	2.75	S. f.
184023	8.0	02.61	18 46 41.175	3.777	−28 15 54.00	4.06	
184200	7.3	02.61	18 47 54.145	3.547	−19 55 9.55	4.16	

No.	Mag.	Epoch.	R. A. 1900.0.	Precess.	Decl. 1900.0.	Precess.	Notes.
			h m s	s	° ′ ″	″	
184848	7.0	1902.61	18 54 42.162	3.540	-19 47 47.99	+ 4.74	
185526	7.0	02.61	19 1 17.175	3.514	-18 53 30.18	5.30	
190204	7.5	02.62	19 7 45.138	3.406	-14 36 51.39	5.84	
191422	7.8	02.62	19 20 20.927	3.583	-22 8 18.44	6.89	
192401	8.5	02.62	19 29 57.012	3.550	-21 8 27.73	7.67	
193525	8.0	02.62	19 41 15.940	3.516	-20 7 27.46	8.58	
194643	7.8	02.62	19 51 51.703	3.099	- 1 15 13.97	9.40	
203703	7.3	02.62	20 42 45.081	3.413	-18 34 11.51	13.07	S. f. 1ˢ (7.6 N. p.)
204558	8.8	02.62	20 51 34.575	3.356	-16 5 59.63	13.65	
210124	7.4	02.62	21 6 41.586	3.173	- 6 13 23.37	14.59	N. f. (9½ S. p.)
211410	7.3	02.62	21 19 26.644	3.163	- 6 0 36.46	15.33	
211630	8.3	02.62	21 21 46.142	3.176	- 6 54 43.08	15.46	
214106	7.9	02.62	21 46 16.482	3.108	- 2 42 37.41	16.73	
214415	8.0	02.62	21 49 38.987	3.232	-12 26 34 78	16.90	
223055	8.7	02.79	22 36 9.507	3.143	- 8 24 35.00	18.73	
223754	8.0	02.79	22 43 8.864	3.139	- 8 38 24.77	18.94	
224043	8.4	02.79	22 45 57.971	3.146	- 9 51 16.74	19.02	
224516	8.3	02.79	22 50 33.489	3.131	- 8 21 16.48	19.14	
225146	8.3	02.79	22 56 58.866	3.125	- 8 15 40.49	19.30	
225520	8.9	02.81	23 1 1.254	3.402	-44 2 37.62	19.39	
225824	9.0	02.81	23 4 5.712	3.128	- 9 43 43.46	19.46	N. p. 13ˢ (4½ S. f.)
230000	7.7	02.93	23 5 12.152	3.119	- 8 21 3.06	19.48	
230028	8.7	02.79	23 5 41.091	3.123	- 9 9 56.36	19.49	
233058	8.5	02.81	23 36 5.530	3.081	- 3 24 47.63	19.94	
233538	6.2	02.81	23 40 49.298	3.112	-19 14 2.95	19.98	Pr. Mo. R. A. (?)
234055	8.2	02.89	23 46 2.067	3.077	- 3 4 32.10	20.01	3 obs.
234915	7.3	02.81	23 54 23.684	3.075	- 3 24 2.77	20.05	

Comparison with the Cordoba General Catalogue. Supplementing the extensive comparison with the Cordoba General Catalogue, in Volume VI, the following tabulation includes the observations of the extra stars of Piazzi, made in this series. The combination has been made in 10° groups to — 30°, and in 5° groups below that Declination. Four differences in Right Ascension, and one in Declination have been excluded, as the differences appear to be large enough to indicate sensible proper motion. No proper motions have been applied to the results of observation, in this series.

The last column, below, contains the average residual in Declination, for each group, from the mean difference, —0″.90.

OBSERVED—C. G. C.

No.	Decl.	$\Delta\alpha$	$\Delta\delta$	v
	°	s	″	″
6	— 5.9	—0.003	—0.92	±0.78
7	—16.1	— .004	—0.21	.67
8	—26.1	— .011	—1.00	.55
4	—32.9	+ .015	—0.82	.52
6	—37.2	+ .005	—1.32	.78
4	—44.5	+ .050	—1.80	1.20
Sum, 35				
Means,	—25.6	+0.004	—0.90	±0.73
Average,		±0.07	±0.9	

OBSERVATIONS OF LATITUDE STARS.

Description. The following list of stars was observed here, at the request of Prof. C. L. Doolittle, of the Flower Observatory, University of Pennsylvania. The list contained, originally, 75 stars. Five more were added later, but as observing had been closed on portions of the list at this time, but three of these were included. Four observations have been given each star, with but one exception; two in each position of the instrument, fixed circle East and West. The stars are distributed so as to fall into four groups, in Right Ascension, which required seven programs, for completion. The stars North of the zenith were observed with Fundamental stars on the same side, as a rule; and similarly for those South of the zenith. In the case of a few exceptions, close to the zenith, the observations were always made facing the same way, throughout each program.

Observing was begun on the list September 1, 1905, and closed July 7, 1906. Thirty nights were used, on which 600 observations were made. The program of fundamental work had been begun, and was in progress during this series. But the reductions are separate, for the two schemes, and this is complete and independent. The observations were made alone. Mr. R. F. Sanford has assisted in the reductions.

The probable error of observation has been derived from the difference of two observations in the same position of the instrument; and from the difference of pairs of observations, in the two positions.

From the first method, there results:

Probable error one observation, R. A. $\pm 0^{s}.020$.

Decl. $\pm 0''.22$, exclusive of the effect of graduation error, which would appear to be equivalent to $\pm 0''.19$, in this series of observations.

From the second method, there results:

Probable error mean of four, R. A. $\pm 0^{s}.012 = \pm 0^{s}.010 \sec \delta = \pm 0''.15$

Decl. $\pm 0''.17$, including the error due to graduation, which is $\pm 0''.13$, for the mean of both positions, in this series. No differences have been rejected in deriving these mean results. And, in the summation, no account has been made of the mean differences, E—W, which were: $+0^{s}.005$, and $+0''.17$, in Right Ascension and Declination, respectively. These differences may be due to accidental errors, and are to be considered as contributing to the errors of the place derived from the observations.

The Fundamental List. With the approval of Professor Doolittle, the system of Newcomb has been adopted for the reduction of these Latitude stars. The places of the following table have been brought forward to the epoch 1906, using the Precessions and Proper Motions of Newcomb's Catalogue. There are 48 stars included, from four to eight being used, each night. The Fundamental stars have been observed four times, as a rule, twice in each position of the instrument, and one star has been observed in two programs.

For 28 stars of the Fundamental list, which are contained in the B. J., a comparison of the places, for 1906, has been made. The places, with Auwers' corrections included, given at the end of the B. J., have also been compared. The results of these comparisons are:

N.—B. J.	$\Delta\alpha$ $+0^{s}.060$	Average $\pm 0^{s}.064$	$\Delta\delta$ $+0''.03$	Average $\pm 0''.37$	28 stars
N.—A.	$+0.012$	± 0.023	$+0.08$	± 0.19	δ $+39^{\circ}.9$

The improvement in the original A. G. C. places, introduced by Auwers' corrections, is very noticeable in this comparison.

The table below includes the observed corrections to Newcomb's places. These depend upon the group of Fundamental stars observed in each program, and may be considered to represent accidental deviations of each star, from the system, within the errors of observation. Some of the observed differences probably indicate errors of sensible amount, in the adopted places. The probable errors of the observed differences are $\pm 0^{s}.010$, and $\pm 0''.17$. Abnormal differences will be noted in Right Assension, for the stars at $8^{h}\ 1^{m}$, $14^{h}\ 25^{m}$, and $17^{h}\ 14^{m}$; while the Declination of the star at $7^{h}\ 17^{m}$ probably requires correction.

The comparison of the Latitude, derived from the observations of these stars near the zenith, with that derived from the observations of the Circumpolar stars in this series, indicates a correction to the Poulkova refraction constant of $-0.004\ \mu$.

FUNDAMENTAL STARS FROM NEWCOMB: REDUCED TO 1906.0.

Star.	Mag.	R. A. 1906.0	Precess.	P. M.	Decl. 1906.0	Precess.	P. M.	Obs.	Corr.	φ
		h m s	s	s	° ′ ″	″	″	s	″	″
μ Aurigæ	4.9	5 6 59.628	+4.1025	-0.0020	+38 22 25.18	+ 4.595	-0.080	+0.050	+0.54	25.87
λ Aurigæ	4.8	5 12 31.631	4.1706	+ .0462	40 0 57.89	4.122	- .658	+ .025	- .05	26.22
υ Aurigæ	5.4	5 38 37.014	4.6462	- .0018	49 47 8.47	1.868	- .018	+ .055	+ .77	25.40
ν Aurigæ	4.2	5 44 58.469	4.1570	- .0001	39 7 17.46	1.314	+ .013	- .038	- .20	26.21
θ Aurigæ	2.7	5 53 18.678	4.0867	+ .0047	37 12 23.48	+ 0.585	- .091	- .010	+ .26	25.74
51 Aurigæ	5.7	6 32 8.775	4.1623	- .0020	39 28 27.22	- 2.803	- .113	+ .032	+ .30	25.75
ψ5 Aurigæ	5.3	6 39 57.988	4.3290	+ .0017	43 40 17.57	3.478	+ .160	- .022	.00	26.17
θ Gemin.	3.6	6 46 35.703	3.9578	+ .0010	34 4 30.43	4.048	- .050	+ .018	- .15	26.16
66 Aurigæ	5.3	7 17 38.095	4.1626	+ .0011	40 51 15.13	6.661	- .018	- .038	-1.04	27.21
ρ Gemin.	4.2	7 23 4.016	3.8525	+ .0117	31 58 19.42	7.108	+ .184	+ .037	- .74	26.75
π Gemin.	5.4	7 41 26.893	3.8762	- .0004	33 38 48.25	8.586	- .042	- .016	+ .70	25.31
27 Lyncis	4.8	8 1 23.552	4.5369	- .0032	51 46 41.59	10.128	- .003	- .108	- .47	26.64
8 Can. Ven.	4.3	12 29 16.910	2.9198	- .0617	41 52 5.41	-19.883	+ .279	- .048	+ .11	25.99
9 Can. Ven.	6.2	12 34 15.059	2.8970	- .0006	41 23 30.82	19.823	- .018	- .033	- .32	26.50
12 Can. Ven.	2.8	12 51 37.934	2.8322	- .0203	38 49 33.33	19.540	+ .049	+ .017	+ .18	26.00
λ Bootis	4.3	14 12 48.689	2.3007	- .0172	46 31 11.00	16.773	+ .151	- .004	- .17	26.52
θ Bootis	4.2	14 21 59.853	2.0689	- .0255	52 17 6.06	16.320	- .405	- .013	+ .59	25.76
204 Bootis	5.7	14 25 54.485	2.3515	+ .0114	42 13 12.90	16.119	- .194	+ .102	- .65	27.00
σ Bootis	4.5	14 30 35.291	2.5982	+ .0150	30 9 11.68	15.873	+ .125	- .034	+ .20	26.13
295 Bootis	6.0	14 45 25.330	2.3776	- .0222	38 11 54.36	15.047	+ .113	+ .001	+ .05	26.30
η Herculis	3.7	16 39 40.371	2.0523	+ .0030	39 6 2.34	- 6.883	- .093	- .039	+ .02	26.00
e Herculis	4.8	17 14 25.595	2.0712	- .0032	37 23 22.86	3.960	+ .059	+ .126	- .04	26.06
w Herculis	5.4	17 17 8.495	2.2331	+ .0094	32 35 17.60	3.727	-1.047	- .013	- .34	26.22
λ Herculis	4.4	17 26 56.358	2.4222	+ .0016	26 10 52.05	2.882	+0.018	- .004	+ .03	25.83
ι Herculis	3.9	17 36 48.699	1.6929	+ .0003	46 3 21.90	2.025	+ .003	- .051	- .17	26.19
89 Herculis	5.5	17 51 37.684	2.4192	+ .0013	26 3 52.53	- 0.732	+ .006	- .035	- .01	26.10
ο Herculis	3.8	18 3 52.526	2.3394	- .0002	28 44 56.99	+ 0.338	+ .002	+ .012	+ .20	25.67
5 B. Lyræ	5.3	18 12 43.333	1.8656	- .0006	42 7 37.15	1.112	- .001	+ .001	- .68	26.70
μ Lyræ	5.0	18 21 7.992	1.9772	- .0021	39 27 20.22	1.846	- .006	- .001	- .10	26.12
ε 1 Lyræ S.	4.7	18 41 13.447	1.9858	+ .0003	39 34 16.94	3.586	+ .055	+ .028	- .09	26.10
β Lyræ	4	18 46 36.557	2.2142	+ .0004	33 15 11.43	4.049	- .005	- .001	+ .06	25.81
R. Lyræ	4.3	18 52 28.502	1.8233	+ .0026	43 49 18.53	4.549	+ .078	- .042	+ .79	25.23
19 Lyræ	5.4	19 8 9.684	2.3009	- .0005	31 7 34.20	5.874	- .006	+ .009	- .04	25.91
159 B. Lyræ	6 6	19 15 49.583	2.0048	+ .0002	40 11 12.61	6.512	+ .008	+ .008	- .24	26.11
4 Cygni	4.2	19 22 45.984	2.1598	- .0004	36 7 44.17	7.084	+ .013	+ .010	+ .32	25.55
14 Cygni	5.4	19 36 22.946	1.9506	+ .0027	42 36 2.35	8.184	+ .045	- .022	+ .27	25.74
τ Cygni	3.9	21 11 2.303	2.3795	+ .0141	37 38 37.95	+14.841	+ .433	+ .028	- .16	26.22
σ Cygni	4.3	21 13 43.401	2.3543	- .0001	39 0 1.98	14.997	+ .003	- .021	- .63	26.69
74 Cygni	5.1	21 33 10.857	2.4024	+ .0003	39 59 27.49	16.071	+ .009	- .017	+ .16	25.89
κ Pegasi	4.2	21 40 23.290	2.7124	+ .0028	25 12 45.74	16.440	+ .013	+ .012	+ .27	25.79
14 Pegasi	4.9	21 45 41.181	2.6502	+ .0022	29 44 10.92	16.701	- .026	- .041	- .40	26.46
16 Pegasi	5.1	21 48 47.072	2.7274	+ .0005	25 28 57.67	16.850	+ .006	- .006	- .32	26.38
13 Cephei	6.1	21 51 43.584	2.0139	- .0008	56 9 56.82	16.988	- .023	- .066	+ .03	26.15
3 Lacertæ	4.6	22 19 51.730	2.3549	- .0007	51 45 28.57	18.163	- .188	- .016	+ .01	26.16
η Pegasi	3.1	22 38 35.669	2.8071	+ .0011	29 43 45.64	18.795	- .037	+ .035	+ .45	25.61
13 Lacertæ	5.1	22 39 53.825	2.6701	- .0011	41 19 32.88	18.834	+ .009	+ .028	- .28	26.46
5 Androm.	5.8	23 3 29.035	2.7000	+ .0150	48 47 0.03	19.439	+ .111	+ .055	+ .69	25.48
15 Androm.	5.5	23 30 1.499	2.9276	- .0009	39 43 4.78	19.875	- .049	+ .014	+ .13	26.04
48 stars.				Mean. Decl.	38°.8				Mean,	26.09
								s	″	
							Average,	±0.030	±0.30	
							East—West =			-0″.42

The Observations of the Circumpolar Stars. Twelve stars were observed for azimuth, in this series; and the Latitude was determined from each observation.

The places of the Circumpolar stars were taken from the B. J., with the addition of Auwers' corrections for 1906.

The observed R. A. correction to the two stars of a pair, used for the determination of the azimuth, will be the same; but this correction is dependent upon the clock correction, derived from the Newcomb stars, near the zenith. The Declinations depend upon the Newcomb stars at the zenith, with the Poulkova Refractions.

The mean Latitude is the same, for the six stars at each culmination, the two stars at $6^h\ 30^m$ and $17^h\ 43^m$ having been given double weight in the mean values.

But the comparison of these Latitudes, with those derived on the same nights from the zenith stars, gives $Z - \text{c. p.} = +0''.33$.

The six upper culmination stars have a mean zenith distance of $35^\circ.7$; and the six lower a mean of $66^\circ.9$. From the mean refraction corrections, at these zenith distances, the observed correction to the Poulkova Refractions, $-0''.22 \tan \text{Z. D.} = -0.004\ \mu$, is derived.

CIRCUMPOLAR STARS; AUWERS' PLACES: OBSERVED CORRECTIONS.

Star.	Mag.	R. A. 1906.0	No.	Obs. Cor.	Decl. 1906.0	Obs. Cor.	φ U. C.	Obs.Cor.	φ L. C.
		h m s		s	° ′ ″	″	″	″	″
40 Cass.	5.6	1 30 59.244	5	+0.071	72 33 40.26			−1.39	24.92
Gr. 966	6.5	5 27 8.967	4	+ .060	74 58 57.36	+0.80	25.27		
22 H. Cam.	4.6	6 8 29.392	4	+ .008	69 21 13.74	.00	26.01		
23 H. Cam.	5.3	6 30 12.163	7	− .005	79 40 2.71			+ .16	26.21
9 H. Draco.	4.6	10 27 7.527	4	+ .041	76 11 51.06			+ .07	26.13
λ Draco.	3.3	11 25 49.978	3	− .020	69 50 59.78			− .67	25.44
Gr. 2001	5.7	13 23 44.181	4	+ .071	72 52 46.17	+ .56	25.71		
ψ Dr. Aus.	4.6	17 43 36.475	8	− .005	72 11 42.48	+ .06	25.89		
δ Urs. Min.	4.3	18 2 35.802	4	+ .060	86 36 50.01			− .71	25.46
ε Draco.	3.8	19 48 29.725	4	+ .008	70 1 42.60			+ .02	26.03
24 Ceph.	4.8	22 8 0.143	4	+ .041	71 52 40.95	+ .04	26.01		
γ Ceph.	3.3	23 35 29.000	4	− .020	77 6 27.70	+ .63	25.55		
Sum		. . . .	55				6		6
Means		. . . .		+0.021		+0.31	25.76	−0.34	25.77
East—West		. . . .	. . . .	. . . .	. . . .		+ 0.19		+ 0.11

Individual Observations. The observations of the Fundamental stars are given in their order, in the pages following. And for each Fundamental star the individual values of the Latitude are included. The numbers of the stars to be determined are those adopted in the original list, for convenience of record. A large proportion of the stars are bright enough to be found in many Catalogues of importance.

INDIVIDUAL OBSERVATIONS OF LATITUDE STARS.

		μ Aurigæ.		φ
1905.		h m s	° ′ ″	″
Nov. 6	W	5 6 55.588	38 22 21.14	25.93
7		55.576	21.11	25.81
		55.582	21.12	25.87
Nov. 14	E	55.560	21.14	25.88
1905.		**λ Aurigæ.**		
Nov. 6	W	5 12 27.481	40 0 53.59	26.75
7		27.512	53.60	26.59
		27.496	53.59	26.67
Nov. 14	E	27.449	53.70	26.27
Dec. 22		27.478	54.24	25.29
		27.464	53.97	25.78
1905.		**o Aurigæ.**		
Nov. 6	W	5 38 32.402	49 47 7.86	25.21
7		32.426	7.45	25.47
		32.414	7.65	25.34
Nov. 14	E	32.465	7.15	25.57
Dec. 22		32.395	6.99	25.35
		32.430	7.07	25.46
1905.		**ν Aurigæ.**		
Nov. 10	W	5 44 54.231	39 7 15.92	26.58
13		54.287	15.90	26.46
		54.259	15.91	26.52
Dec. 29	E	54.300	16.28	25.53
1906. Jan. 3		58.437	16.99	26.26
				25.90
1905.		**No. 1.**		
Nov. 6	W	5 46 2.999	39 33 1.35	
7		3.030	1.59	
		3.015	1.47	
Nov. 14	E	3.018	1.68	
22		3.048	1.50	
		3.033	1.59	

		No. 2.		φ
1905.		h m s	° ′ ″	″
Nov. 6	W	5 52 38.238	40 1 28.43	
7		38.272	27.93	
		38.255	28.18	
Nov. 14	E	38.285	28.46	
22		38.264	28.52	
		38.275	28.49	
1905.		**θ Aurigæ.**		
Nov. 10	W	5 53 14.593	37 12 23.21	26.05
13		14.575	22.81	26.31
		14.584	23.01	26.18
Dec. 29	E	14.585	23.40	25.16
1906. Jan. 3		18.657	23.81	25.46
				25.31
1905.		**No. 3.**		
Nov. 10	W	6 0 4.546	32 0 15 32	
13		4.507	16.08	
		4.526	15.70	
Dec. 29	E	4.505	15.78	
1906. Jan. 3		8.370	16.01	
1905.		**No. 4.**		
Nov. 6	W	6 10 58.305	39 53 29.31	
7		58.320	29.28	
		58.312	29.29	
Nov. 14	E	58.316	29.87	
Dec. 22		58.307	29.90	
		58.312	29.89	
1905.		**No. 5.**		
Nov. 6	W	6 15 22.368	44 27 19.85	
7		22.368	20.16	
		22 368	20.00	
Nov. 14	E	22.394	20.29	
Dec. 22		22.390	19.75	
		22.392	20.02	

				No. 6.				φ
1905.		h	m	s	°	′	″	″
Nov. 10	W	6	16	50.998	35	34	0.07	
13				50.883			0.53	
				50.940			0.30	
Dec. 29	E			50.918			0.24	
1906.								
Jan. 3				54.947		33	59.44	
1905.				**No. 7.**				
Nov. 6	W	6	19	30.694	39	58	54.85	
7				30.654			55.10	
				30.674			54.97	
Nov. 14	E			30.716			55.09	
Dec. 22				30.718			54.68	
				30.717			54.89	
1905.				**No. 8.**				
Nov. 10	W	6	20	0.183	39	43	42.31	
13				0.107			42.03	
				0.145			42.17	
Dec. 29	E			0.122			40.97	
1906.								
Jan. 3				4.227			39.65	
1905.				**51 Aurigæ.**				
Nov. 6	W	6	32	4.657	39	28	29.89	26.63
7				4.680			29.82	26.55
13				4.647			30.23	26.03
				4.661			29.98	26.40
Nov. 14	E			4.661			30.97	25.20
Dec. 22				4.646			30.99	24.79
29				4.631			30.03	25.67
				4.646			30.66	
1906.								
Jan. 3				8.753			27.62	25.39
								25.26
1905.				**No. 9.**				
Nov. 10	W	6	37	49.336	36	12	12.44	
13				49.297			12.36	
				49.316			12.40	
Dec. 29	E			49.294			13.45	
1906.								
Jan. 3				53.295			10.37	
1905.				**ψ_5 Aurigæ.**				
Nov. 6	W	6	39	53.662	43	40	20.71	26.80
7				53.622			21.29	26.07
				53.642			21.00	26.43
Nov. 14	E			53.650			20.90	26.26
Dec. 22				.614			21.23	25.57
				53.632			21.06	25.91

				No. 10.				φ
1905.		h	m	s	°	′	″	″
Nov. 6	W	6	46	0.353	40	2	30.20	
7				0.332			30.33	
				0.342			30.26	
Nov. 14	E			0.286			31.16	
Dec. 22				0.278			31.25	
				0.282			31.20	
1905.				**θ Gemin.**				
Nov. 10	W	6	46	31.796	34	4	34.08	26.77
13				31.737			34.57	26.14
				31.766			34.32	26.45
Dec. 29	E			31.773			34.44	25.71
1906.								
Jan. 3				35.702			30.19	26.03
								25.87
1905.				**No. 11.**				
Nov. 6	W	6	50	52.032	37	31	5.70	
7				51.979			5.77	
				52.005			5.74	
Nov. 14	E			52.014			7.21	
Dec. 22				52.072			7.07	
				52.043			7.14	
1905.				**No. 12.**				
Nov. 6	W	6	57	11.982	45	12	9.09	
7				11.972			9.72	
				11.977			9.40	
Nov. 14	E			11.977			9.72	
Dec. 22				12.007			9.21	
				11.992			9.46	
1905.				**No. 13.**				
Nov. 6	W	7	6	8.028	47	46	1.25	
7				7.969			2.42	
				7.998			1.83	
Nov. 14	E			8.028			2.48	
Dec. 22				8.107			2.50	
				8.068			2.49	
1905.				**No. 14.**				
Nov. 10	W	7	6	56.656	32	7	29.01	
13				56.582			28.92	
				56.619			28.96	
Dec. 29	E			56.578			29.43	
1906.								
Jan. 3				60.471			24.63	

		h	m	s	°	′	″	φ ″
1905.				**No. 15.**				
Nov. 6	W	7	11	57.657	51	39	57.77	
7				57.651			58.20	
				57.654			57.99	
Nov. 14	E			57.666			58.05	
Dec. 22				57.774			57.89	
				57.720			57.97	
1905.				**No. 16.**				
Nov. 10	W	7	14	26.798	28	17	51.60	
13				26.732			51.68	
				26.765			51.64	
Dec. 29	E			26.683			52.06	
1906.								
Jan. 3				30.489			46.24	
1905.				**66 Aurigæ.**				
Nov. 6	W	7	17	33.886	40	51	21.09	27.19
7				33.879			20.92	27.20
				33.883			21.00	27.19
Nov. 14	E			33.881			20.30	27.62
Dec. 22				33.929			20.70	26.84
				33.905			20.50	27.23
1905.				**No. 17.**				
Nov. 10	W	7	17	57.329	36	29	43.08	
13				57.294			42.87	
				57.312			42.98	
Dec. 29	E			57.294			43.27	
1906.								
Jan. 3				61.354			36.48	
1905.				**ρ Gemin.**				
Nov. 10	W	7	23	0.194	31	58	25.74	27.13
13				0.210			25.87	26.86
				0.202			25.80	26.99
Dec. 29	E			0.187			25.76	26.44
1906.								
Jan. 3				4.060			18.62	26.59
								26.51
1905.				**No. 18.**				
Nov. 6	W	7	27	10.832	41	22	38.25	
7				10.841			39.08	
				10.836			38.67	
Nov. 14	E			10.876			38.70	
Dec. 22				10.880			38.84	
				10.878			38.77	

		h	m	s	°	′	″	φ ″
1905.				**No. 19.**				
Nov. 10	W	7	31	22.291	39	5	28.02	
13				22.328			27.76	
				22.309			27.89	
Dec. 29	E			22.332			26.96	
1906.								
Jan. 3				26.406			20.49	
1905.				**No. 20.**				
Nov. 6	W	7	32	54.033	40	53	12.70	
7				53.950			12.64	
				53.991			12.67	
Nov. 14	E			54.010			13.11	
Dec. 22				54.092			12.87	
				54.051			12.99	
1905.				**π Gemin.**				
Nov. 10	W	7	41	23.013	33	38	57.93	25.27
13				22.981			57.55	25.51
				22.997			57.74	25.39
Dec. 29	E			22.965			57.03	25.48
1906.								
Jan. 3				26.920			49.05	24.99
								25.23
1905.				**No. 21.**				
Nov. 6	W	7	43	46.988	40	0	33.55	
7				46.936			33.69	
				46.962			33.62	
Nov. 14	E			47.032			33.51	
Dec. 22				47.061			34.16	
				47.046			33.84	
1905.				**No. 22.**				
Nov. 6	W	7	48	33.370	39	57	44.22	
7				33.354			44.15	
				33.362			44.18	
Nov. 14	E			33.424			44.49	
Dec. 22				33.449			43.94	
				33.436			44.22	
1905.				**27 Lync.**				
Nov. 6	W	8	1	18.883	51	46	51.35	26.85
7				18.863			51.43	26.62
				18.873			51.39	26.73
Nov. 14	E			18.904			51.44	26.41
Dec. 22				18.978			50.79	26.68
				18.941			51.11	26.55

No. 23.

1906.		h	m	s	°	′	″	φ ″
Apr. 4	W	12	24	8.037	50	9	18.18	
5				7.998			18.52	
				8.017			18.35	
May 22	E			7.992			18.16	
23				7.997			18.29	
				7.993			18.23	

8 Can. Ven.

1906.								
Apr. 5	W	12	29	16.867	41	52	5.45	26.28
May 22	E			16.811			5.87	25.50
23				16.843			5.54	26.19
				16.827			5.70	25.84

9 Can. Ven.

1906.								
Apr. 4	W	12	34	15.048	41	23	30.91	26.34
5				15.050			30.69	26.38
				15.049			30.80	26.36
May 22	E			14.981			30.04	26.62
23				15.024			30.37	26.65
				15.003			30.20	26.64

No. 24.

1906.								
Apr. 4	W	12	42	15.268	47	53	9.62	
5				15.291			9.46	
				15.280			9.54	
May 22	E			15.285			10.09	
23				15.331			10.44	
				15.308			10.26	

No. 25.

1906.								
Apr. 4	W	12	46	27.508	31	59	19.62	
5				27.535			20.02	
				27.522			19.82	
May 22	E			27.565			19.30	
23				27.603			20.22	
				27.584			19.76	

12 Can. Ven.

1906.								
Apr. 4	W	12	51	37.901	38	49	33.33	26.44
5				37.922			33.51	26.08
				37.912			33.42	26.26
May 22	E			37.953			33.49	25.71
23				38.003			33.78	25.78
				37.978			33.64	25.74

No. 26.

1906.		h	m	s	°	′	″	φ ″
Apr. 4	W	12	59	36.101	43	30	44.73	
5				36.126			45.32	
				36.114			45.03	
May 22	E			36.199			43.93	
23				36.129			44.49	
				36.164			44.21	

No. 27.

1906.								
Apr. 4	W	13	5	20.063	51	39	22.52	
5				20.108			22.99	
				20.085			22.75	
May 22	E			20.090			22.01	
23				20.148			21.45	
				20.119			21.73	

No. 28.

1906.								
Apr. 4	W	13	36	24.242	45	27	48.03	
5				24.217			48.37	
				24.230			48.20	
May 22	E			24.272			47.83	
23				(24.360)			48.68	
31				24.224			48.18	
				24.248			48.23	

No. 29.

1906.								
Apr. 4	W	13	41	55.377	34	31	49.70	
5				55.352			49.21	
				55.364			49.45	
May 22	E			55.369			49.82	
31				55.336			49.69	
				55.352			49.75	

λ Bootis.

1906.								
Apr. 4	W	14	12	48.669	46	31	10.32	27.15
5				48.711			10.64	26.65
				48.690			10.48	26.90
May 22	E			48.656			11.25	25.66
31				48.680			11.30	26.63
				48.668			11.28	26.14

No. 30.

1906.								
Apr. 4	W	14	17	49.260	39	59	55.40	
5							56.19	
							55.79	
May 22	E			49.234			56.07	
31				49.208			55.70	
				49.221			55.89	

θ Bootis.

1906.		h	m	s	°	′	″	φ ″
Apr. 4	W	14	21	59.846	52	17	6.86	25.53
5				59.879			6.81	25.40
				59.862			6.84	25.46
May 22	E			59.833			6.48	25.25
31				59.771			5.89	26.88
				59.802			6.18	26.06

204 Bootis.

1906.								
Apr. 4	W	14	25	54.582	42	13	12.40	26.88
5				54.576			12.58	26.52
				54.579			12.49	26.70
May 22	E			54.625			11.81	26.86
31				54.581			11.95	27.74
				54.603			11.88	27.30

σ Bootis.

1906.								
Apr. 4	W	14	30	35.277	30	9	11.97	26.17
5				35.228			11.73	26 23
				35.252			11.85	26.20
May 22	E			35.278			12.14	25.44
31				35.266			11.92	26.68
				35.272			12.03	26.06

295 Bootis.

1906.								
Apr. 4	W	14	45	25.300	38	11	54.29	26.53
5				25.293			54.16	26.48
				25.296			54.22	26.50
May 22	E			25.364			54.46	25.79
31				25.335			54.86	26.42
				25.350			54.66	26.10

No. 31.

1906.								
Apr. 4	W	14	51	52.248	40	1	57.58	
5				52.382			57.62	
				52.315			57.60	
May 22	E			52.288			57.58	
31				52.232			56.95	
				52.260			57.26	

η Herc.

1906.								
June 22	E	16	39	40.365	39	6	3.01	25.28
23				40.348			2 37	25.62
				40.356			2.69	25.45
June 28	W			40.294			1.76	26.70
29				40.325			2.12	26.39
				40.310			1.94	26.55

No. 76.

1906.		h	m	s	°	′	″	φ ″
June 22	E	16	44	20.791	37	43	34.71	
23				20.823			35.06	
				20.807			34.88	
June 28	W			20.719			35.36	
29				20.728			35.05	
				20.723			35.20	

No. 32.

1906.							
June 22	E	16	52	14.047	40	0	18.29
23				14.092			18.78
				14.070			18.54
June 28	W			14.008			18.10
29				14.068			18.90
				14.038			18.50

No. 33.

1906.							
June 22	E	16	57	46.116	45	54	51.46
23				46.144			51.50
				46.130			51.48
June 28	W			46.048			51.44
29				46.140			51.71
				46.094			51.58

No. 34.

1906.							
June 22	E	17	1	10.072	45	34	44.82
23				10.080			44.69
				10.076			44.76
June 28	W			10.065			43.91
29				10.085			44.12
				10.075			44.02

No. 35.

1906.							
June 22	E	17	7	25.631	39	57	60.21
23				25.651			59.82
				25.641			60.01
June 28	W			25.659			59.80
29				25.672			59.82
				25.665			59.81

No. 36.

1906.							
June 25	E	17	13	53.341	31	37	8.28
27				53.364			9.46
				53.352			8.87
July 6	W			53.381			8.75
7				53.392			8.32
				53 386			8.53

e Herc.

1906.		h m s	° ′ ″	φ ″
June 22	E	17 14 25.709	37 23 23.13	25.75
23		25.719	23.11	25.47
		25.714	23.12	25.61
June 28	W	25.702	22.40	26.66
29		25.749	22.74	26.37
		25.726	22.57	26.51

w Herc.

1906.				
June 25	E	17 17 8.470	32 35 16.91	25.41
27		8.476	16.49	26.21
		8.473	16.70	25.81
July 6	W	8.503	16.80	26.60
7		8.499	16.73	26.65
		8.501	16 76	26.63

No. 37.

1906.			
June 22	E	17 18 1.417	48 16 53.27
23		1.387	53.47
		1.402	53.37
June 28	W	1.424	53.31
29		1.371	52.98
		1.398	53.15

No. 38.

1906.			
June 27	E	17 22 14.926	26 57 35.21
July 6	W	14.914	34.94
7		14.913	34.86
		14 914	34.90

No. 39.

1906.			
June 22	E	17 23 19.730	52 52 22.00
23		19 818	22.37
		19.774	22.18
June 28	W	19.748	22.64
29		19.775	23.48
		19.762	23.06

λ Herc.

1906.				
June 25	E	17 26 56.324	26 10 51.94	25.34
27		56.378	51.69	25.98
		56.351	51.82	25.66
July 6	W	56.374	52.32	26.08
7		56.344	52.40	25.94
		56.359	52.36	26.01

No. 40.

1906.		h m s	° ′ ″	φ ″
June 22	E	17 31 40.697	40 58 11.06	
23		40.674	10.96	
		40.686	11.01	
June 28	W	40.666	10.59	
29		40.639	11.72	
		40.652	11.15	

ι Herc.

1906.				
June 22	E	17 36 48.693	46 3 20.90	26.99
23		48.656	22.18	25.41
		48.674	21.54	26.20
June 28	W	48.635	22.09	25 98
29		48.609	21.75	26.37
		48.622	21.92	26.18

No. 41.

1906.			
June 25	E	17 37 54.867	35.47 4.13
27		54.896	4.74
		54.882	4.44
July 6	W	54.866	3.98
7		54.890	3.82
		54.878	3.90

89 Herc.

1906.				
June 27	E	17 51 37.648	26 3 52.37	25.77
July 6	W	37.652	52.61	26.26
7		37.651	52.60	26.25
		37.651	52.60	26.26

No. 42.

1906.			
June 25	E	17 55 21.503	35 38 18.91
27		21.535	17.94
		21.519	18.43
July 6	W	21.483	18.83
7		21.530	18.87
		21.507	18.85

o Herc.

1906.				
June 25	E	18 3 52.498	28 44 56.86	25.35
27		52.588	57.24	25.36
		52.543	57.05	25.35
July 6	W	52.493	57.43	25.90
7		52.574	57.23	26.08
		52.533	57.33	25.99

No. 43.

1906.		h m s	° ′ ″	φ ″
June 22	E	18 4 56.011	39 54 25.44	
23		56.046	25.78	
		56.028	25.61	
June 28	W	56.027	26.31	
29		56.008	25.70	
		56.018	26.01	

5 B Lyr.

1906.				
June 22	E	18 12 43.326	42 7 36.28	26.86
23		43.313	36.37	26.47
		43.319	36.32	26.67
June 28	W	43.366	36.48	26.84
29		43.331	36.75	26.62
		43.349	36.62	26.73

No. 44.

1906.			
June 22	E	18 16 38.638	39 2 59.24
23		38.650	59.52
		38.644	59.38
June 28	W	38.629	58.96
29		38.695	59.07
		38.662	59.02

μ Lyr.

1906.				
June 22	E	18 21 7.971	39 27 20.69	25.52
23		7.969	20.17	25.74
		7.970	20.43	25.63
June 28	W	8.009	19.90	26.49
29		8.010	19.70	26.74
		8.010	19.80	26.61

No. 45.

1906.			
June 22	E	18 25 14.438	39 56 9.50
23		14.460	8.84
		14.449	9.17
June 28	W	14.440	9.14
29		14.440	8 88
		14.440	9.01

No. 46.

1906.			
June 22	E	18 36 37.932	40 1 56.12
23		37.980	56.13
		37.956	56.12
June 28	W	37.943	56.02
29		37.940	55.63
		37.942	55.82

ϵ_1 Lyr. s

1906.		h m s	° ′ ″	φ ″
June 22	E	18 41 13.494	39 34 16.54	26.42
23		13 460	16.49	26.17
		13.477	16.51	26.29
June 28	W	13.464	17.11	26.03
29		13.482	17.40	25.79
		13.473	17.25	25.91

β Lyr.

1906.				
June 25	E	18 46 36.555	33 15 11.43	25.22
27		36.551	11.63	25.41
		36.553	11.53	25.31
July 6	W	36.547	11.44	26.33
7		36.570	11.46	26.29
		36.559	11.45	26.31

No. 47.

1906.			
June 22	E	18 48 51.300	41 37 30.42
23		51.317	30 84
		51.308	30.63
June 28	W	51.278	29.98
29		51.343	30.12
		51.310	30.05

R Lyr.

1906.				
June 22	E	18 52 28.446	43 49 19.01	25.55
23		28.466	18.76	25.50
		28.456	18.88	25.53
June 28	W	28.491	20.13	24.61
29		28.440	19.54	25.25
		28.466	19.84	24.93

No. 48.

1906.			
June 25	E	18 53 51.600	36 20 40.07
27		51.616	39.96
		51.608	40.01
July 6	W	51.585	39.19
7		51.633	39.14
		51.609	39.17

No. 49.

1906.			
June 22	E	18 56 12.821	43 35 25.20
23		12 895	25.30
		12.858	25.25
June 28	W	12.847	25.60
29		12.909	25.76
		12.878	25.68

No. 50.

1906.		h	m	s	°	′	″	φ ″
June 22	E	19	0	54.626	39	58	33.67	
23				54.643			33.69	
				54.634			33.68	
June 28	W			54.634			33.10	
29				54.625			33.59	
				54.630			33.34	

No. 51.

1906.		h	m	s	°	′	″	φ ″
June 25	E	19	3	27.682	35	58	54.87	
27				27.617			54.42	
				27.649			54.65	
July 6	W			27.698			53.80	
7				27.680			53.38	
				27.689			53.59	

No. 52.

1906.		h	m	s	°	′	″	φ ″
June 22	E	19	5	15.428	43	53	9.67	
23				15.566			9.59	
				15.497			9.63	
June 28	W			15.456			10.51	
29				15.496			10.32	
				15.476			10.41	

19 Lyr.

1906.		h	m	s	°	′	″	φ ″
June 25	E	19	8	9.689	31	7	33.95	25.47
27				9.689			34.57	25.24
				9.689			34.26	25.36
July 6	W			9.697			33.88	26.66
7				9.695			34.25	26.27
				9.696			34.06	26.46

No. 53.

1906.		h	m	s	°	′	″	φ ″
June 22	E	19	9	13.140	41	4	45.13	
23				13 124			45.14	
				13.132			45.13	
June 28	W			13.120			45.21	
29				13.092			44.49	
				13.106			44 85	

No. 77.

1906.		h	m	s	°	′	″	φ ″
June 25	E	19	12	8.478	39	56	53.77	
27				8.451			53.74	
				8.464			53.76	
July 6	W			8.464			53.88	
7				8.483			53.05	
				8.474			53.46	

No. 54.

1906.		h	m	s	°	′	″	φ ″
June 22	E	19	13	56.086	38	51	30.96	
23				56.062			30.91	
				56.074			30.93	
June 28	W			56.024			30.90	
29				56.091			30.08	
				56.058			30.49	

159 B Lyr.

1906.		h	m	s	°	′	″	φ ″
June 25	E	19	15	49.618	40	11	12.33	25.50
27				49.587			12.47	25.75
				49.603			12.40	25.62
July 6	W			49.603			12.52	26.43
7				49.555			12.17	26.76
				49.579			12.34	26.60

No. 78.

1906.		h	m	s	°	′	″	φ ″
June 25	E	19	19	22.504	37	23	59.53	
27				22.516			59.01	
				22.510			59.27	
July 6	W			22.513			58.08	
7				22.489			57.98	
				22.501			58.03	

4 Cyg.

1906.		h	m	s	°	′	″	φ ″
June 25	E	19	22	46.035	36	7	45.17	24.23
27				45.959			44.61	25.18
				45.997			44.89	24.70
July 6	W			45.998			44.08	26.44
7				45.985			44.15	26.35
				45.991			44.11	26.40

14 Cyg.

1906.		h	m	s	°	′	″	φ ″
June 22	E	19	36	22.878	42	36	2.81	25.55
23				22 956			2.93	25.13
				22.917			2.87	25.34
June 28	W			22.918			2.47	26.07
29				22.946			2.36	26.23
				22.932			2.41	26.15

No. 55.

1905.		h	m	s	°	′	″	φ ″
Sep. 1	E	21	3	13.371	39	56	14.37	
11				13.345			14.71	
				13.358			14.54	
Sep. 26	W			13.327			14.37	
29				13.348			13.88	
				13.338			14.12	

τ Cyg.

1905.			h	m	s	°	′	″	φ ″
Sep.	1	E	21	10	59.966	37	38	23.22	25.29
	11				59.941			23.80	25.54
					59.954			23.51	25.42
Sep.	26	W			59.922			22.53	26.71
	29				59.959			21.78	27.33
					59.940			22.15	27.02

σ Cyg.

1905.			h	m	s	°	′	″	φ ″
Sep.	1	E	21	13	41.039	38	59	46.44	26.08
	11				41.005			46.61	26.73
					41.022			46.53	26.40
Sep.	26	W			41.041			46.18	27.03
	29				41.015			46.16	26.93
					41.028			46 17	26.98

No. 56.

1905.			h	m	s	°	′	″
Sep.	1	E	21	17	18.703	39	56	49.61
	11				18.678			49.68
					18.690			49.64
Sep.	26	W			18.784			48.79
	29				18.753			49.05
					18.768			48.92

No. 57.

1905.			h	m	s	°	′	″
Sep.	1	E	21	25	10.744	39	58	5.57
	11				10.688			6.32
					10.716			5.94
Sep.	26	W			10.779			5.14
	29				10.741			6.17
					10.760			5.66

No. 58.

1905.			h	m	s	°	′	″
Sep.	1	E	21	29	6.501	39	59	12.78
	11				6.532			12.96
					6.516			12.87
Sep.	26	W			6.550			11.71
	29				6.441			11.50
					6.496			11.61

74 Cyg.

1905.			h	m	s	°	′	″	φ ″
Sep.	1	E	21	33	8.415	39	59	11.72	25.24
	8				8.476			11.64	25.78
	11				8.470			11.98	25.80
					8.454			11.78	25.61
Sep.	26	W			8.466			11.05	26.60
	29				8.357			11.51	26.02
					8.412			11.28	26.31

κ Peg.

1905.			h	m	s	°	′	″	φ ″
Sep.	18	E	21	40	20.580	25	12	29.65	25.65
	21				20.596			29.23	25.54
					20.588			29.44	25.59
Oct.	4	W			20.602			29.26	25.99
	5				20.576			30.13	25.99
					20.589			29.70	25.99

No. 59.

1905.			h	m	s	°	′	″
Sep.	8	E	21	41	50.134	41	43	38.61
	11				50.068			38.94
					50.101			38.77
Sep.	26	W			50.070			38.84
	29				50 108			39.39
					50.089			39.11

No. 60.

1905.			h	m	s	°	′	″
Sep.	8	E	21	44	32.691	38	12	24.80
	11				32.736			25.00
					32.714			24.90
Sep.	26	W			32.643			23.83
	29				32.668			24.17
					32.656			24.00

14 Peg.

1905.			h	m	s	°	′	″	φ ″
Sep.	18	E	21	45	38.494	29	43	53.93	26.30
	21				38.467			53.76	25.94
					38.480			53.84	26.12
Oct.	4	W			38.478			53.86	26.32
	5				38.522			53 75	27.30
					38.500			53.80	26.81

No. 61.

1905.			h	m	s	°	′	″
Sep.	8	E	21	48	19.842	47	59	26.87
	11				19.821			26.37
					19 832			26.62
Sep.	26	W			19.762			25.66
	29				19.778			26.19
					19.770			25.92

16 Peg.

1905.			h	m	s	°	′	″	φ ″
Sep.	18	E	21	48	44.339	25	28	40.68	26.14
	21				44.335			39.87	26.42
					44.337			40.28	26.28
Oct.	4	W			44.342			40.71	26.06
	5				44.333			40.73	26.91
					44.337			40.72	26.48

13 Ceph.

1905.		h	m	s	°	′	″	φ ″
Sep. 8	E	21	51	41.474	56	9	39.20	26.64
11				41.564			39.76	26.44
				41.519			39.48	26.54
Sep. 26	W			41.536			40.12	25.95
29				41.442			40.39	25.56
				41.489			40.26	25.76

No. 62.

1905.							
Sep. 18	E	21	55	46.874	26	19	41.63
21				46.877			40.76
				46.876			41.19
Oct. 4	W			46.873			40.75
5				46.920			41.28
				46.896			41.01

No. 63.

1905.							
Sep. 8	E	21	56	38.428	53	39	6.84
11				38.418			7.39
				38.423			7.11
Sep. 26	W			38.469			7.20
29				38.447			7.21
				38.458			7.21

No. 64.

1905.							
Sep. 18	E	22	0	22.508	32	28	52.27
21				22.522			51.23
				22.515			51.75
Oct. 4	W			22.465			51.64
5				22.508			51.93
				22.487			51.79

No. 65.

1905.							
Sep. 8	E	22	10	12.398	40	0	46.37
11				12.417			46.71
				12.407			46.54
Sep. 26	W			12.392			46.92
29				12.427			46.26
				12.409			46.59

No. 66.

1905.							
Sep. 18	E	22	14	44.972	28	22	14.25
21				45.013			14.35
				44.992			14.30
Oct. 4	W			45.003			13.74
5				44.977			12.69
				44.990			13.22

No. 67.

1905.		h	m	s	°	′	″	φ ″
Sep. 8	E	22	16	11.608	51	31	46.97	
11				11.610			46.96	
				11.609			46.97	
Sep. 26	W			11.592			46.81	
29				11.647			47.21	
				11.619			47.01	

3 Lacert.

1905.								
Sep. 8	E	22	19	49.342	51	45	10.38	26.08
11				49.362			9.89	26.93
				49.352			10.14	26.50
Sep. 26	W			49.374			10.67	26.01
29				49.360			10.94	25.62
				49.367			10.80	25.82

No. 68.

1905.							
Sep. 18	E	22	22	27.671	36	16	60.51
21				27.695			59.75
				27.683			60.13
Oct. 4	W			27.681			59.82
5				27.724			59.13
				27.703			59.47

No. 69.

1905.							
Sep. 8	E	22	24	0.206	43	38	5.62
11				0.204			6.11
				0.205			5.87
Sep. 26	W			0.223			7.40
29				0.213			7.06
				0.218			7.23

No. 70.

1905.							
Sep. 8	E	22	28	52.974	40	51	40.59
11				52.929			40.53
				52.952			40.56
Sep. 26	W			52.896			40.18
29				53.008			39.67
				52.952			39.92

No. 71.

1905.							
Sep. 8	E	22	35	8.955	40	6	19.97
11				8.926			19.83
				8.940			19.90
Sep. 26	W			8.987			19.89
28				8.974			19.68
				8.980			19.78

		η Peg.		φ
1905.		h m s	° ′ ″	″
Sep. 18	E	22 38 32.899	29 43 26.93	25.92
21		32.915	28.33	23.99
		32.907	27.63	24.96
Oct. 4	W	32.893	27.37	25.43
5		32.881	26.58	27.09
		32.887	26.97	26.26
1905.		**13 Lacert.**		
Sep. 8	E	22 39 51.158	41 19 13.88	26.16
11		51.165	13.42	26.98
		51.161	13.65	26.57
Sep. 26	W	51.171	13.93	26.34
29		51.240	13.80	26.35
		51.205	13.87	26.35
1905.		**No. 72.**		
Sep. 8	E	22 45 22.939	40 0 47.94	
11		22.947	47.88	
		22.943	47.91	
Sep. 26	W	22.906	48.30	
29		23.024	48.04	
		22.965	48.17	
1905.		**No. 73.**		
Sep. 8	E	22 58 52.495	37 47 15.09	
11		52.469	14.82	
		52.482	14.95	
Sep. 26	W	52.481	14.87	
29		52.512	14.31	
		52.496	14.59	

		5 Andr.		φ
1905.		h m s	° ′ ″	″
Sep. 8	E	23 3 26.405	48 46 41.44	25.12
11		26.320	40.78	26.14
		26.362	41.11	25.63
Sep. 26	W	26.343	41.44	25.35
29		26.476	41.36	25.31
		26.410	41.40	25.33
1905.		**No. 74.**		
Sep. 8	E	23 8 44.145	40 57 56.67	
11		43.980	56.63	
		44.063	56.65	
Sep. 26	W	44.061	57.74	
29		44.030	57.05	
		44.045	57.39	
1905.		**No. 75.**		
Sep. 8	E	23 21 52.228	39 52 5.85	
11		52.140	5.79	
		52.184	5.82	
Sep. 26	W	52.191	6.69	
29		52.286	6.45	
		52.238	6.57	
1905.		**15 Andr.**		
Sep. 8	E	23 29 58.599	39 42 44.73	26.19
11		58.595	44.97	26.31
		58.597	44.85	26.25
Sep. 26	W	58.574	45.25	25.89
29		58.571	45.24	25.78
		58.573	45.25	25.83

Catalogue of Latitude Stars. The following list gives the current number of the star, in the series; the catalogue magnitude (generally A. G. Zones), followed by the observed magnitude; the epoch of observation; and the precessions for 1906, based upon Newcomb's constants. These last were computed under Professor Doolittle's direction, and forwarded to us in season to be used in the reductions. A carefully computed list of the places was also sent us. These were evidently taken from the A. G. Zones, and they have been compared with the observations made here, with the following result:

Obs.— D., 78 stars, $\Delta\ \alpha$ —0ˢ.02; average Δ ±0ˢ.076.
$\Delta\ \delta$ —0″.1; average Δ ±0″.82.

Four differences, exceeding 0ˢ.4, were excluded from the mean, in Right Ascension. And two differences in Declination, exceeding 4″, were excluded from the mean.

The systematic error of the A. G. Zones does not appear to be large, even at this date. The accidental errors, however, are of considerable importance.

Observations of Latitude Stars.

Star.	Mag.		Epoch.	R. A. 1906.0.	Precess.	Decl. 1906.0.	Precess.	No.	
				h m s	s	° ′ ″	″	E.	W.
No. 1	5.7	5.7	1905.89	5 46 7.198	4.1741	39 33 2.74	+ 1.213	2	2
2	6.9	6.9	05.89	5 52 42.459	4.1942	40 1 28.97	+ 0.638	2	2
3	7.0	7.0	05.93	6 0 8.413	3.9077	32 0 15.79	− 0.012	2	2
4	7.0	7.1	05.89	6 11 2.500	4.1882	39 53 28.63	0.965	2	2
5	7.4	7.4	05.89	6 15 26.761	4.3807	44 27 18.66	1.350	2	2
6	7.2	7.5	05.93	6 16 54.955	4.0254	35 33 58.96	1.478	2	2
7	8.0	8.0	05.89	6 19 34.885	4.1890	39 58 53.22	1.711	2	2
8	7.2	7.2	05.93	6 20 4.294	4.1788	39 43 39.93	1.753	2	2
9	6.0	6.2	05.93	6 37 53.333	4.0373	36 12 9.68	3.299	2	2
10	7.0	7.0	05.89	6 46 4.485	4.1728	40 2 26.73	4.003	2	2
11	6.2	6.3	05.89	6 50 56.097	4.0733	37 31 2.02	4.419	2	2
12	7.5	7.5	05.89	6 57 16.361	4.3765	45 12 4.47	4.958	2	2
13	7.3	7.1	05.89	7 6 12.517	4.4836	47 45 56.45	5 711	2	2
14	6.8	6.8	05.93	7 7 0.479	3.8759	32 7 23.66	5.778	2	2
15	7.7	7.7	05.89	7 12 2.367	4.6797	51 39 51.78	6.198	2	2
16	7.6	7.3	05.93	7 14 30.491	3.7542	28 17 45.59	6.403	2	2
17	7.3	7.0	05.93	7 18 1.321	4.0044	36 29 36.41	6.693	2	2
18	7.9	7.8	05.89	7 27 15.022	4.1654	41 22 31.27	7.449	2	2
19	7.0	7.0	05.93	7 31 26.394	4.0728	39 5 19.97	7.788	2	2
20	7.4	7.4	05.89	7 32 58.157	4.1356	40 53 4.92	7.911	2	2
21	7.2	7.1	05.89	7 43 51.085	4.0809	40 0 24.95	8.776	2	2
22	7.8	7.8	05.89	7 48 37.468	4.0688	39 57 35.05	9.149	2	2
23	7.4	7.5	06.32	12 24 8.006	2.9041	50 9 18.29	− 19.935	2	2
24	7.8	7.8	06.32	12 42 15.294	2.8014	47 53 9.90	19.707	2	2
25	7.5	7.7	06.32	12 46 27.553	2.9044	31 59 19.79	19.636	2	2
26	6.3	6.5	06.32	12 59 36.139	2.7462	43 30 44.62	19.372	2	2
27	7.8	7.9	06.32	13 5 20.102	2.5973	51 39 22.24	19.237	2	2
28	7.7	7.6	06.33	13 36 24.239	2.5178	45 27 48.22	18.299	3	2
29	7.5	7.5	06.33	13 41 55.358	2.6768	34 31 49.60	18.096	2	2
30	8.0	8.0	06.33	14 17 49.234	2.4381	39 59 55.84	16.529	2	2
31	7.7	7.5	06.33	14 51 52.287	2.3072	40 1 57.43	14.669	2	2
76	7.2	7.2	06.48	16 44 20.765	2.0944	37 43 35.04	− 6.498	2	2
32	7.8	7.8	06.48	16 52 14.054	1.9995	40 0 18.52	5.841	2	2
33	7.0	7.2	06.48	16 57 46.112	1.7432	45 54 51.53	5.376	2	2
34	7.7	7.5	06.48	17 1 10.076	1.7534	45 34 44.39	5.090	2	2
35	6.8	7.0	06.48	17 7 25.653	1.9817	39 57 59.91	4.558	2	2
36	7.5	7.3	06.50	17 13 53.369	2.2663	31 37 8.70	4.006	2	2
37	6.7	6.7	06.48	17 18 1.400	1.5985	48 16 53.26	3.652	2	2
38	6.5	6.5	06.50	17 22 14.918	2.4019	26 57 35.00	3.287	1	2
39	6.4	6.4	06.48	17 23 19.768	1.3296	52 52 22.62	3.193	2	2
40	6.5	6.6	06.48	17 31 40.669	1.9208	40 58 11.08	2.471	2	2
41	7.9	7.8	06.50	17 37 54.880	2.1136	35 47 4.17	1.929	2	2
42	7.0	7.1	06.50	17 55 21.513	2.1145	35 38 18.64	− 0.406	2	2
43	7.4	7.2	06.48	18 4 56.023	1.9550	39 54 25.81	+ 0.432	2	2
44	7.9	7.8	06.48	18 16 38.653	1.9912	39 2 59.20	1.455	2	2
45	7.9	7.8	06.48	18 25 14.444	1.9604	39 56 9.09	2.203	2	2
46	7.7	7.4	06.48	18 36 37.949	1.9641	40 1 55.97	3.191	2	2
47	7.7	7.5	06.48	18 48 51.309	1.9118	41 37 30.34	4.241	2	2
48	7.0	7.0	06.50	18 53 51.608	2.1162	36 20 39.59	4.668	2	2
49	7.4	7.1	06.48	18 56 12.868	1.8383	43 35 25.46	4.868	2	2
50	7.6	7.4	06.48	19 0 54.632	1.9914	39 58 33.51	5 265	2	2

OBSERVATIONS OF LATITUDE STARS.

Star.	Mag.		Epoch.	R. A. 1906.0.	Precess.	Decl. 1906.0.	Precess.	No.	
				h m s	s	° ′ ″	″	E.	W.
No. 51	7.4	7.5	1906.50	19 3 27.669	2.1391	35 58 54.12	+ 5.480	2	2
52	7.7	7.6	06.48	19 5 15.486	1.8388	43 53 10.02	5.631	2	2
53	7.3	7.1	06.48	19 9 13.119	1.9602	41 4 44.99	5.963	2	2
77	7.9	7.8	06.50	19 12 8.469	2.0081	39 56 53.61	6.206	2	2
54	7.2	6.9	06.48	19 13 56.066	2.0512	38 51 30.71	6.355	2	2
78	6.0	6.1	06.50	19 19 22.506	2.1114	37 23 58.65	6.805	2	2
55	7.9	7.8	05.71	21 3 15.640	2.2925	39 56 28.70	+14.375	2	2
56	6.6	6.7	05.71	21 17 21.072	2.3430	39 57 4.49	15.206	2	2
57	7.5	7.6	05.71	21 25 13.110	2.3721	39 58 21.45	15.646	2	2
58	7.0	7.0	05.71	21 29 8.893	2.3867	39 59 28.10	15.858	2	2
59	7.9	8.0	05.71	21 41 52.492	2.3967	41 43 55.46	16.515	2	2
60	6.2	6.3	05.72	21 44 35.171	2.4864	38 12 41.10	16.648	2	2
61	7.0	7.0	05.72	21 48 22.067	2.2662	47 59 43.10	16.830	2	2
62	7.8	7.8	05.74	21 55 49.617	2.7314	26 19 58.28	17.175	2	2
63	7.3	7.4	05.72	21 56 40.582	2.1415	53 39 24.37	17.213	2	2
64	7.0	7.0	05.74	22 0 25.149	2.6483	32 29 9.15	17.379	2	2
65	7.7	7.5	05.72	22 10 14.964	2.5554	40 1 4.36	17.791	2	2
66	7.5	7.5	05.74	22 14 47.744	2.7526	28 22 31.73	17.971	2	2
67	7.8	7.8	05.72	22 16 13.950	2.3365	51 32 5.02	18.026	2	2
68	7.8	7.8	05.74	22 22 30.360	2.6675	36 17 18.06	18.259	2	2
69	6.7	6.6	05.72	22 24 2.766	2.5543	43 38 24.86	18.315	2	2
70	7.7	7.7	05.72	22 28 55.577	2.6250	40 51 58.72	18.484	2	2
71	7.0	7.2	05.72	22 35 11.626	2.6653	40 6 38.53	18.689	2	2
*72	7.7	7.9	05.72	22 45 25.668	2.7137	40 1 7.03	18.994	2	2
73	7.6	7.5	05.72	22 58 55.288	2.7995	37 47 34.11	19.339	2	2
74	7.8	7.5	05.72	23 8 46.869	2.8152	40 58 16.57	19.548	2	2
75	6.9	6.7	05.72	23 21 55.099	2.8878	39 52 25.96	+19.770	2	2

*N. fol. 5″

THE GRADUATION ERRORS.

An outline of the methods, employed here, for the measurement of graduation errors, has been given in the introduction to Volume IV of the Publications of this Observatory. The investigation had been carried, at that time, as far as to include the 1° divisions of the fixed circle, and the 3° divisions of the movable circle, and the corrections are tabulated, there, on page 46.

In the period of two years, 1903 to 1905, the measurement of the 10′ divisions of the fixed circle has been completed; along with a repetition of the 15° divisions of both circles, and the 1° divisions of the fixed circle. Also some measurements have been made of 2′ divisions, on both circles.

The methods and results of these later investigations are given with considerable detail, in L. O. Bulletin No. 85; and, without repeating the discussion there contained, the present description will be confined to general results.

The measurements, down to the 3° divisions, for each circle, are independent of the errors of the other circle. For the 1° divisions of the fixed circle, an arc of three degrees, on the movable circle, is used as a standard. The errors of the four divisions of this standard are determined, during the progress of the work, independently of the errors of the fixed circle, and with a weight of 90 measures, each.

For the 10′ divisions, an arc of one degree of the movable circle is used as a standard, and the errors of the seven 10′ divisions are determined with a weight of 540 measures, each. The entire series of readings must be completed, before the corrections to the standard divisions can be derived, by the elimination of the errors of the divisions with which they have been successively compared.

The original readings of both observers, in the 10′ arcs, were checked by the differences of each microscope reading from the mean of four. These differences have been combined, and reduced, so as to give the graduation errors of the individual divisions, throughout the fixed circle. While single microscopes will be rarely used, in observing, the detailed treatment of this material seems to be desirable, for the information it may afford, of the quality of the graduation. The corrections for separate divisions are tabulated, accordingly; with the correction for the mean of four, which will be generally employed.

The 2′ divisions of a degree of each circle have been independently measured, by consecutive microscope readings of one circle, through an arc of ten minutes, at the same setting; shifting the position of the instrument by 2′, between successive settings. The entire circle could be measured in this manner. But it will perhaps be more economical to measure such divisions, only, as are desired for observations of high precision.

The divisions employed in the program of stars for the first year of fundamental observing have been measured, and the results are tabulated as special 2′ measures. Divisions, used for the remaining stars in that program, had already been determined. The measurement is made from the nearest 10′ division, not more than four minutes distant, and the plan followed was to make a double series upon a list of divisions, consecutively. This was repeated, in another series, until eight measures had been obtained of each division. The extra 2′ division, adjoining, was also measured, at the same time, since the readings are useful for the determination of the Runs correction, and the extra labor involved is only half as great as that required for the measurement of the desired division. The middle division of the three is set at the center of the field, and the microscope micrometers are employed for only two revolutions, each side of the center. In computing the error of these measures, the error of the Runs determination must be included. And in computing the errors of all the determinations of graduation correction, the error of measure of the standard divisions must be considered. The error of measure is concerned with the difference of two divisions: the error of the final correction must include the error of measure of the standard. While the circle can be divided into large arcs, which include the adopted division as standard, the error is entirely differential. For small arcs, the limitations of the length of a series of measures require the measurement to be made from the nearest division already determined.

The general character of the graduation errors may be summed up briefly. There are small periodic terms, which can be derived from the 3° divisions, and which have been discussed in Bulletin No. 85. The periodic error amounts to ±0″.09, on the average, with a range of about double that quantity. Besides the error of periodic character, there is a tendency toward groups of errors of the same size, which seems to be casual as far as it concerns the circle as a whole, but which can be classed as systematic, for arcs of considerable length. The purely accidental part of the error can be derived, by the comparison of adjoining errors, throughout. For arcs smaller than three degrees, of course, the adoption of the measured corrections to 3° divisions would interfere with any discussion of periodic errors, since these divisions were adopted as standards, in subdividing. The probable error of graduation, for the entire series of 10′ divisions of the fixed circle, is ±0″.19, for the mean of four divisions. This would be distributed, on the basis of the discussion, referred to above, as follows:

periodic,	±0″.07,
systematic,	±0 .15,
accidental,	±0 .10.

From the relation between the purely accidental part of the graduation error and the total amount, it may be inferred, that by interpolating corrections, between the divisions already measured, the effect of graduation error would be reduced to about one half of the original amount.

The graduation errors are first determined by measurement from the division at 0°, as a base. In the Table of Corrections, the correction +0″.18 is adopted as that of 0°, in conformity with the Table of Corrections in Volume IV, which included the 1° divisions only; and the final corrections are, accordingly, the residuals from this adopted standard. Since the mean of all the 10′ corrections, reckoned from 0°, is −0″.24, the mean of the tabular corrections is now −0″.06. The average residual from this mean is ±0″.24, representing the average graduation error of the 10′ divisions; and the largest errors are 0″.72, and 0″.78. The average difference of two adjacent 10′ corrections is ±0″.18, for the mean of four.

For the separate divisions, the average difference from the mean of four is ±0″.20. The average correction for single divisions is ±0″.31, which checks with the average correction for the mean of four, ±0″.24. The average difference of the corrections for two adjacent single 10′ divisions is ±0″.34. The average difference of two adjacent corrections, for the mean of four 2′ divisions, is ±0″.19, and the average difference for 4′ spaces is the same. This difference must be taken into account, in estimating the probable error of the Runs correction, derived from a limited number of 2′ spaces. For twelve settings, the usual number in a special series for the extra 2′ divisions, one and a half hours in length, the probable error of the Runs correction, aside from its error due to readings, would be ±0″.05, nearly.

To illustrate the accuracy of the graduation, the errors may be converted into linear measure. One second of arc on these circles is about $\frac{1}{16000}$ inch, and the average graduation error of a single division is $\frac{1}{50000}$ inch. The largest error, aside from one defective line, is five times the average, or $\frac{1}{10000}$ inch. Five errors exceed four times the average; and 23 errors, or one in one hundred, exceed 1″.

The measurements from which the resulting corrections have been derived, and the respective probable errors, are summed up below. In the first steps of the investigation, it is not easy to clear the accidental errors of measure from the other sources of error, systematic in part; since separate determinations include errors of the latter class, such as circle flexure, which are eliminated in the mean results. For the 1° divisions, the 10′, and 2′ divisions, the errors of measurement can be rigorously computed; and these are useful, in establishing the degree of precision which can be reached, and the relation of this precision to the size of the quantity to be measured. The probable errors of measure are in good agreement, as a rule, with those to be predicted from the probable errors of a circle reading, upon which the errors of measure of small arcs depend directly. The probable error of a circle reading has varied, from ±0″.11, for the best of the earlier work, to ±0″.16 for the long series of later readings. A single measure of graduation error consists of the comparison of four readings of both circles, in one position of the instrument, with four readings of both circles, in another position, when the two circles are used.

When but one circle is used, as in the measurement of 2′ divisions, a single measure consists of double readings on the 2′ division, and on the standard 10′ division. In either case, the probable error of one measure is equal to the probable error of a single circle reading.

The measurement of graduation error, down to the 10′ divisions, has required, in round numbers, 500 hours of microscope reading, for two observers. About 40,000 circle readings have been made, for the purpose. Assistance, in making these measures, has been rendered by Dr. R. G. Aitken and Mr. Elliott Smith.

The 2′ divisions of a degree can be measured, by consecutive 2′ steps, in eight hours, by one observer, with a weight of seven measures each. The extra 2′ divisions have required an hour, each, for eight measures of the two adjacent lines. This would be equivalent to twelve hours of reading, for the measurement of all the intermediate 2′ divisions in one degree. The method of consecutive steps is more economical, if the whole circle is to be measured; greater precision is attained, with two thirds of the labor.

The tabulation of the measures follows:

System.	Number of Measures.	P. E. Measure.	P. E. Correction.
45° arcs	64 + 12 + 10 = 86		± 0″.02
15° arcs	24 + 10 + 12 = 46	(± 0″.02)	± .03
3° arcs	20	(± 0 .03)	± .04
1° arcs	Two of 5 = 10	± 0 .04	± .05
10′ arcs	8	± 0 .04	± .06
2′ arcs (consecutive)	7	± 0 .05	± .07
2′ arcs (extra)	8	± 0 .07	± .09
Separate 10′ divisions	7	± 0 .06	± .09

The difference in precision, for the 2′ divisions, between the consecutive readings, and the extra determinations, is due to the effect of Runs correction in the last; and to the measurement from one standard 10′ division, in place of two.

The probable error of the determination of the graduation correction, for the 10′ divisions, is about one third the probable error of graduation; and the probable error of the differential measure, ± 0″.04, is about one third of the accidental part of the graduation error, ± 0″.10.

The corrections for the 2′ divisions can be determined within a probable error of one half the graduation error. The limit of practically useful measures has nearly been reached, at this stage.

The tabulation which follows gives the correction for the reading of the circle. In terms of the position of the telescope, the corrections would be derived as follows, for the reading of the lower left-hand microscope:

Circle West: South; Zen. Dist. − 45° 4′
North; (360° − Z. D.) − 45° 4′
Circle East: South; (360° − Z. D.) − 45° 4′
North; Zen. Dist. − 45° 4′

GRADUATION CORRECTIONS. 10′ DIVISIONS. FIXED CIRCLE A.

		0°	+90°	+180°	+270°	Mean.			0°	+90°	+180°	+270°	Mean.
°	′	″	″	″	″	″	°	′	″	″	″	″	″
0	0	+0.14	+0.22	+0.33	+0.03	+0.18	10	0	-0.05	+0.07	+0.14	+0.08	+0.06
	10	+ .22	+ .14	+ .35	- .59	+ .03		10	+ .23	- .23	- .02	- .02	- .01
	20	+ .41	+ .29	+ .56	- .02	+ .31		20	+ .16	+ .02	+ .32	- .18	+ .08
	30	- .09	+ .01	+ .06	+ .58	+ .14		30	- .11	- .13	+ .07	+ .01	- .04
	40	- .13	- .11	- .53	- .39	- .29		40	+ .20	- .21	- .51	- .80	- .33
	50	+ .35	- .12	+ .16	+ .21	+ .15		50	- .48	- .82	- .74	- .16	- .55
1	0	+ .38	- .13	+ 23	+ .32	+ .20	11	0	- .35	- .13	- .28	- .16	- .23
	10	+ .21	+ .26	- .13	+ .62	+ .24		10	- .32	- .30	- .33	+ .03	- .23
	20	+ .25	+ .41	+ .54	+ .72	+ .48		20	- .48	- .23	- .18	- .47	- .34
	30	+ .28	+ .47	+ .37	+ .04	+ .29		30	- .41	- .51	- .37	+ .13	- .29
	40	+ .56	+ .43	+ .40	+ .49	+ .47		40	- .01	- .25	+ .26	+ .04	+ .01
	50	+ .22	+ .30	+ .32	+ .04	+ .22		50	- .09	- .27	- 09	- .43	- .22
2	0	+ .05	+ .34	.00	+ .05	+ .11	12	0	.00	+ .39	- .19	- .48	- .07
	10	+ .25	+ .47	+ .39	+ .25	+ .34		10	- .65	- .45	- .35	- .51	- .49
	20	+ .72	- .07	+ .40	+ .43	+ .37		20	- .58	- .08	- .55	- .27	- .37
	30	+ .28	+ .04	+ .13	+ .55	+ .25		30	- .11	- .48	- .29	- .36	- .31
	40	+ .27	- .23	+ .07	+ .37	+ .12		40	- .19	- .35	- .56	- .26	- .34
	50	+ .21	+ .42	+ .35	- .46	+ .13		50	- .30	- .63	- .32	+ .09	- .29
3	0	+ .50	+ .74	+ .19	+ .25	+ .42	13	0	- .58	+ .03	+ .10	- .31	- .19
	10	- .08	+ .32	- .15	+ .27	+ .09		10	- .32	- .17	- .80	- .47	- .44
	20	- .06	+ .25	+ .18	+ .51	+ .22		20	- .18	- .55	- .36	- .31	- .35
	30	- .22	- .55	- .02	- .25	- .26		30	- .33	- .34	- .19	- .46	- .33
	40	- .14	+ .30	+ .29	+ .07	+ .13		40	- .36	-1.03	- .75	- .46	- .65
	50	.00	- .03	- .35	- .22	- .15		50	- .56	- .62	- .52	- .46	- .54
4	0	+ .09	- .53	+ .23	+ .05	- .04	14	0	- .02	+ .58	+ .43	- .59	+ .10
	10	- .01	+ .17	+ .20	- .16	+ .05		10	- .36	- .71	- .80	- .25	- .53
	20	- .21	+ .20	+ .22	- .21	.00		20	- .54	- .32	- .75	- .23	- .46
	30	- .03	- .34	- .17	+ .46	- .02		30	- .20	- .70	- .80	- .50	- .55
	40	- .38	- .49	- .40	- .29	- .39		40	- .62	- .76	+ .86	- .96	- .37
	50	+ .20	+ .04	- .31	- .13	- .05		50	- .53	- .51	- .79	- .57	- .60
5	0	- .48	- .10	+ .20	- .14	- .13	15	0	- .61	+ .05	+ .03	- .19	- .18
	10	+ .07	+ .02	- .73	- .12	- .19		10	- .32	- .31	-1.01	- .56	- .55
	20	- .54	- .15	- .35	.00	- .26		20	- .54	- .40	- .16	- .26	- .34
	30	- .05	- .46	- .54	- .23	- .32		30	- .93	- .20	- .48	- .43	- .51
	40	.00	- .04	+ .04	- .52	- .13		40	+ .23	- .55	- .46	- .70	- .37
	50	- .69	- .59	- .42	- .34	- .51		50	- .70	- .60	- .90	- .20	- .60
6	0	- .10	- .31	- .07	- .24	- .18	16	0	- .34	- .39	+ .03	- .46	- .29
	10	+ .32	+ .37	+ .28	- .17	+ .20		10	- .39	- .37	- .75	- .13	- .41
	20	- .27	- .10	- .29	+ .10	- .14		20	+ .11	- .25	- .53	- .41	- .27
	30	- .16	- .26	+ .49	- .19	- .03		30	- .42	- .70	- .27	- .17	- .39
	40	- .14	- .07	- .26	- .17	- .16		40	- .56	- .67	- .22	- .47	- .48
	50	- .22	- .26	- .58	- .02	- .27		50	- .55	+ .08	- .76	- .53	- .44
7	0	- .15	+ .22	- .35	- .20	- .12	17	0	- .35	- .42	+ .04	- .43	- .29
	10	+ .30	- .06	- .14	+ .14	+ .06		10	- .43	- .88	- .42	- .07	- .45
	20	- .15	- .43	- .52	- .78	- .47		20	- .48	- .18	- .46	- .36	- .37
	30	- .36	- .29	+ .26	- .29	- .17		30	- .40	+ .03	- .04	+ .01	- .10
	40	- .60	- .62	+ .13	- .23	- .33		40	- .48	- .35	- .79	- .50	- .53
	50	- .17	- .42	- .58	+ .09	- .27		50	- .27	- .13	- .25	- .23	- .22
8	0	+ .18	- .10	+ .16	- .28	- .01	18	0	- .37	+ .10	- .45	- .24	- .24
	10	+ .24	+ .23	+ .28	+ .05	+ .20		10	.00	- .32	- .20	- .48	- .25
	20	+ .01	- .18	- .11	+ .40	+ .03		20	+ .04	- .68	- .38	- .30	- .33
	30	+ .66	+ .58	- .01	+ .01	+ .31		30	- .44	- .49	+ .12	- .39	- .30
	40	- .17	+ .55	+ .65	+ .13	+ .29		40	- .17	- .42	.00	- .21	- .20
	50	+ .17	+1.01	+ .73	+ .13	+ .51		50	- .41	- .37	- .64	- .26	- .42
9	0	+ .07	- .09	- .14	+ .52	+ .09	19	0	- .59	- .02	+ .08	- .55	- .27
	10	+ .49	- .08	+ .12	+ .63	+ .29		10	+ .07	- .27	- .62	- .50	- .33
	20	+ .22	+ .47	+ .25	+ .14	+ .27		20	- .43	- .35	- .45	- .33	- .39
	30	- .04	- .36	+ .23	+ .13	- .01		30	- .48	+ .02	- .41	- .41	- .32
	40	+ .02	+ .44	- .03	- .07	+ .09		40	- .34	- .74	- .78	- .34	- .55
	50	+ .09	+ .75	+ .16	+ .40	+ .35		50	- .14	- .60	+ .34	- .16	- .14

		0°	+90°	+180°	+270°	Mean.			0°	+90°	+180°	+270°	Mean.
°	′	″	″	″	″	″	°	′	″	″	″	″	″
20	0	−0.04	+0.21	−0.12	+0.03	+0.02	30	0	−0.03	+0.08	−0.04	+0.07	+0.02
	10	+ .23	+ .06	+ .03	+ .08	+ .10		10	− .68	− .44	− .30	+ .54	− .22
	20	+ .12	+ .31	+ .13	+ .24	+ .20		20	− .08	− .18	− .15	− .43	− .21
	30	− .25	− .04	+ .26	− .45	− .12		30	− .39	− .10	− .05	− .70	− .31
	40	− .31	.00	− .34	+ .21	− .11		40	− .21	− .32	− .18	− .41	− .28
	50	− .17	+ .26	+ .18	+ .21	+ .12		50	+ .23	− .33	+ .42	− .32	.00
21	0	+ .46	− .16	− .16	− .02	+ .03	31	0	+ .81	+ .04	− .20	+ .03	+ .17
	10	+ .34	− .03	+ .24	+ .05	+ .15		10	+ .09	− .18	− .41	+ .14	− .09
	20	+ .43	+ .24	+ .32	+ .01	+ .25		20	− .42	+ .10	− .20	+ .32	− .05
	30	− .35	+ .47	+ .34	+ .74	+ .30		30	− .42	+ .39	+ .16	− .49	− .09
	40	+ .16	+ .17	+ .02	− .43	− .02		40	− .60	− .33	− .18	− .13	− .31
	50	+ .18	− .63	− .29	+ .14	− .15		50	− .05	+ .48	.00	+ .29	+ .18
22	0	− .28	− .06	− .32	− .10	− .19	32	0	+ .32	− .68	+ .12	.00	− .06
	10	− .24	− .08	+ .13	− .45	− .16		10	− .16	+ .30	− .38	− .24	− .12
	20	− .12	− .40	− .38	− .06	− .24		20	− .66	+ .22	− .33	− .07	− .21
	30	− .11	+ .11	+ .26	+ .06	+ .08		30	+ .09	− .18	− .30	− .21	− .15
	40	− .19	+ .01	− .41	+ .19	− .10		40	+ .07	− .42	− .11	− .14	− .15
	50	+ .19	− .22	− .11	− .38	− .13		50	− .39	− .20	− .21	− .32	− .28
23	0	− .25	− .02	− .17	− .04	− .12	33	0	− .64	− .47	− .20	− .45	− .44
	10	− .25	− .30	− .30	− .31	− .29		10	− .42	− .47	− .14	− .53	− .39
	20	− .42	− .31	− .27	− .16	− .29		20	+ .22	− .38	− .74	− .50	− .35
	30	− .70	− .82	− .07	− .81	− .60		30	− .43	− .34	− .32	+ .09	− .25
	40	− .26	− .37	− .30	− .43	− .34		40	− .60	−1.01	− .27	− .56	− .61
	50	− .28	+ .05	− .20	− .05	− .12		50	+ .02	− .03	+ .02	− .21	− .05
24	0	− .12	+ .19	− .34	+ .19	− .02	34	0	− .19	+ .04	− .64	− .41	− .30
	10	.00	− .02	− .23	− .27	− .13		10	− .37	− .64	− .38	+ .07	− .33
	20	− .35	− .37	− .27	− .33	− .33		20	− .53	− .48	− .43	− .44	− .47
	30	+ .31	− .01	− .34	− .04	− .02		30	− .78	− .16	− .52	−1.06	− .63
	40	− .55	− .46	− .20	− .39	− .40		40	− .75	− .76	− .90	− .55	− .74
	50	+ .09	− .68	+ .06	+ .01	− .13		50	− .85	− .64	− .93	− .18	− .65
25	0	− .15	− .12	− .14	− .23	− .16	35	0	− .67	− .90	− .31	−1.00	− .72
	10	− .16	− .24	+ .02	− .14	− .13		10	− .46	− .58	− .32	− .92	− .57
	20	− .29	+ .19	− .02	.00	− .03		20	− .48	− .22	− .61	− .09	− .35
	30	− .29	+ .03	− .13	− .41	− .20		30	− .07	− .70	− .38	− .57	− .43
	40	− .63	+ .20	− .23	− .06	− .18		40	− .72	− .37	− .45	− .74	− .57
	50	+ .09	− .69	− .45	− .27	− .33		50	− .14	− .14	− .68	− .20	− .29
26	0	− .42	+ .35	− .71	− .30	− .27	36	0	− .56	− .81	− .44	− .35	− .54
	10	+ .06	− .15	− .39	− .20	− .17		10	− .70	− .49	− .26	− .63	− .52
	20	− .24	− .42	− .79	− .07	− .38		20	− .21	− .50	− .25	− .40	− .34
	30	+ .18	− .23	− .12	+ .13	− .01		30	− .82	− .22	− .41	− .47	− .48
	40	− .24	− .15	+2.31*	− .08	+ .46		40	− .84	− .28	− .38	− .10	− .40
	50	− .28	+ .10	− .40	− .66	− .31		50	− .49	− .56	− .84	− .11	− .50
27	0	+ .52	− .14	− .47	− .15	− .06	37	0	+ .34	− .39	− .50	− .61	− .29
	10	+ .12	+ .10	+ .05	+ .05	+ .08		10	− .39	− .34	− .51	+ .08	− .29
	20	− .39	− .12	− .28	+ .27	− .13		20	− .04	− .63	− .26	− .27	− .30
	30	− .13	+ .12	+ .15	+ .02	+ .04		30	− .26	− .35	+ .17	− .80	− .31
	40	+ .05	+ .24	+ .02	+ .41	+ .18		40	− .27	− .20	− .22	− .27	− .24
	50	+ .05	− .06	− .24	− .23	− .12		50	+ .03	− .23	− .35	− .53	− .27
28	0	− .03	− .19	+ .03	− .33	− .13	38	0	+ .47	− .08	− .10	− .73	− .11
	10	− .18	− .18	− .44	.00	− .20		10	− .19	+ .36	+ .03	+ .52	+ .18
	20	− .33	− .45	− .44	−1.34	− .64		20	− .18	+ .06	+ .23	+ .77	+ .22
	30	− .47	− .32	− .07	+ .38	− .12		30	− .15	+ .04	+ .23	+ .24	+ .09
	40	− .32	− .20	+ .09	+ .15	− .07		40	− .16	+ .10	− .15	− .35	− .14
	50	+ .93	− .21	− .21	+ .29	+ .20		50	− .17	− .12	− .17	+ .58	+ .03
29	0	.00	+ .06	− .01	− .05	.00	39	0	+ .13	+ .13	− .02	− .36	− .03
	10	+ .32	− .21	+ .04	− .27	− .03		10	− .21	− .07	− .16	+ .08	− .09
	20	− .68	− .21	− .81	+ .70	− .25		20	− .37	+ .07	+ .21	− .15	− .06
	30	+ .15	+ .40	− .06	− .21	+ .07		30	+ .27	+ .13	+ .06	− .34	+ .03
	40	− .13	− .43	− .26	−. 78	− .40		40	− .03	− .21	− .02	+ .22	− .01
	50	− .51	+ .01	+ .34	− .28	− .11		50	− .11	+ .01	+ .16	− .06	.00

*Division badly marked.

		0°	+90°	+180°	+270°	Mean.
°	′	″	″	″	″	″
40	0	-0.36	-0.15	-0.47	+0.14	-0.21
	10	+ .27	- .31	- .06	- .50	- .15
	20	- .05	+ .18	+ .10	- .67	- .11
	30	- .15	- .69	- .48	+ .08	- .31
	40	- .59	- .82	- .13	-1.14	- .67
	50	- .33	+ .07	- .21	+ .95	+ .12
41	0	+ .23	+ .14	- .75	- .34	- .18
	10	- .12	+ .16	+ .10	- .54	- .10
	20	+ .22	+ .10	+ .18	- .02	+ .12
	30	- .33	- .21	- .28	- .34	- .29
	40	- .14	- .40	+ .50	.00	- .01
	50	- .51	- .46	- .54	- .01	- .38
42	0	- .17	+ .08	- .72	- .23	- .26
	10	- .16	- .01	- .21	- .30	- .17
	20	- .33	- .93	- .14	- .32	- .43
	30	- .43	- .29	- .36	- .68	- .44
	40	- .56	- .58	- .57	- .09	- .45
	50	- .55	- .29	- .56	- .44	- .46
43	0	- .24	- .21	- .76	- .07	- .32
	10	- .64	+ .07	- .73	- .74	- .51
	20	- .49	- .54	.00	- .37	- .35
	30	- .49	- .77	- .21	- .25	- .43
	40	- .71	- .93	- .05	- .19	- .47
	50	- .02	+ .14	- .62	- .82	- .33
44	0	+ .35	+ .38	+ .11	- .44	+ .10
	10	- .30	- .34	- .47	+ .15	- .24
	20	- .06	- .73	- .29	- .36	- .36
	30	- .13	- .25	- .05	- .09	- .13
	40	- .58	- .49	+ .09	- .10	- .27
	50	+ .32	- .36	- .23	- .49	- .19
45	0	- .27	+ .09	- .54	- .72	- .36
	10	- .33	- .15	.00	.00	- .12
	20	- .03	- .21	- .05	+ .45	+ .04
	30	- .20	+ .40	.00	+ .08	+ .07
	40	+ .33	+ .24	- .39	- .06	+ .03
	50	- .53	- .15	+ .02	- .54	- .30
46	0	- .28	+ .03	- .33	+ .18	- .10
	10	- .01	- .36	+ .29	-1.04	- .28
	20	- .34	- .39	+ .03	+ .10	- .15
	30	- .18	- .11	- .41	+ .02	- .17
	40	+ .18	+ .07	- .21	- .28	- .06
	50	+ .01	- .25	- .04	+ .08	- .05
47	0	- .30	- .36	+ .18	+ .60	+ .03
	10	- .02	+ .02	- .08	- .04	- .03
	20	+ .19	+ .42	+ .37	+ .70	+ .42
	30	+ .40	+ .34	+ .35	+ .59	+ .42
	40	+ .29	+ .47	- .26	- .50	.00
	50	+ .28	+ .51	- .29	+ .02	+ .13
48	0	+ .41	- .07	+ .60	+ .10	+ .26
	10	+ .24	+ .16	+ .45	- .33	+ .13
	20	+ .33	+ .15	+ .45	+ .79	+ .43
	30	- .11	+ .78	+ .45	+ .08	+ .30
	40	+ .28	+ .18	+ .39	+1.23	+ .52
	50	+ .59	+ .34	+ .38	+ .13	+ .36
49	0	+ .03	+ .39	- .12	- .06	+ .06
	10	+ .21	+ .02	+ .53	+ .04	+ .20
	20	+ .44	+ .03	- .12	- .07	+ .07
	30	+ .16	+ .07	+ .08	+ .49	+ .20
	40	- .41	+ .15	- .01	+ .35	+ .02
	50	+ .21	- .45	- .21	- .07	- .13
50	0	+0.16	-0.60	-0.60	+0.12	-0.23
	10	- .87	- .31	- .27	- .75	- .55
	20	- .13	- .31	+ .26	- .66	- .21
	30	- .23	+ .17	- .17	- .09	- .08
	40	- .59	+ .48	+ .03	- .16	- .06
	50	- .58	- .08	- .58	- .12	- .34
51	0	+ .60	- .49	- .09	- .42	- .10
	10	+ .60	- .06	+ .05	+ .25	+ .21
	20	- .55	+ .09	+ .13	+ .49	+ .04
	30	+ .07	+ .14	+ .29	+ .26	+ .19
	40	- .06	+ .08	+ .73	+ .13	+ .22
	50	+ .02	+ .18	+ .06	+ .14	+ .10
52	0	+ .85	+ .06	- .32	- .71	- .03
	10	- .27	- .26	- .54	- .09	- .29
	20	- .36	- .36	- .33	- .51	- .39
	30	- .12	+ .02	- .55	+ .01	- .16
	40	- .54	- .22	+ .10	+ .22	- .11
	50	- .09	+ .70	+ .02	- .39	+ .06
53	0	+ .50	- .42	+ .36	- .04	+ .10
	10	- .44	- .15	+ .13	+ .26	- .05
	20	- .06	+ .11	- .15	+ .06	- .01
	30	+ .54	- .20	+ .14	+ .44	+ .23
	40	+ .10	- .23	- .53	- .18	- .21
	50	- .69	+ .29	- .17	+ .09	- .12
54	0	+ .69	- .34	- .04	- .19	+ .03
	10	- .34	+ .03	+ .08	- .25	- .12
	20	- .38	- .23	- .17	- .62	- .35
	30	- .26	+ .42	+ .04	- .28	- .02
	40	- .29	- .17	+ .67	+ .11	+ .08
	50	- .03	- .39	- .18	+ .40	- .05
55	0	+ .52	- .05	+ .46	+ .07	+ .25
	10	- .22	+ .37	- .64	+ .05	- .11
	20	+ .16	+ .01	+ .04	+ .31	+ .13
	30	- .04	+ .04	+ .13	+ .03	+ .04
	40	- .04	+ .16	- .29	- .07	- .06
	50	- .33	+ .76	+ .03	- .10	+ .09
56	0	+1.17	+ .23	+ .48	- .12	+ .44
	10	+ .63	+ .14	+ .15	+ .52	+ .36
	20	- .23	+ .15	+ .57	+ .71	+ .30
	30	+ .61	+ .43	+ .28	- .16	+ .29
	40	+ .48	- .04	+ .60	+ .56	+ .40
	50	+ .62	- .08	- .04	+ .70	+ .30
57	0	+ .31	+ .79	+ .19	+ .23	+ .38
	10	+ .22	+ .93	+ .76	+ .65	+ .64
	20	+ .18	+ .03	+ .28	+ .67	+ .29
	30	+ .27	+ .53	+1.04	+ .16	+ .50
	40	+ .73	+ .75	+ .55	+ .73	+ .69
	50	+ .65	+ .53	+ .63	+ .63	+ .61
58	0	+1.28	+ .45	+ .46	+ .69	+ .72
	10	+ .70	+ .41	+ .46	+ .27	+ .46
	20	+ .20	+ .26	+ .20	+ .50	+ .29
	30	- .08	+ .72	+ .55	+ .41	+ .40
	40	- .10	+ .29	+ .74	+ .11	+ .26
	50	+ .38	+ .24	+ .32	+ .30	+ .31
59	0	+1.01	+ .42	+ .01	- .04	+ .35
	10	+ .35	+ .30	- .18	+ .37	+ .21
	20	- .07	- .09	+ .38	+ .94	+ .29
	30	+ .04	+ .55	+ .48	+ .33	+ .35
	40	+ .79	+ .23	+ .42	+ .52	+ .49
	50	+ .03	+ .16	+ .55	+ .22	+ .24

		0°	+90°	+180°	+270°	Mean.			0°	+90°	+180°	+270°	Mean.
°	'	″	″	″	″	″	°	'	″	″	″	″	″
60	0	+0.12	+0.14	+0.54	+0.24	+0.26	70	0	-0.14	+0.06	-0.20	-0.44	-0.18
	10	+ .22	+ .87	- .18	- .23	+ .17		10	- .39	- .28	- .14	- .03	- .21
	20	+ .06	+ .42	+ .33	+ .03	+ .21		20	- .23	- .29	- .36	- .68	- .39
	30	+ .10	- .39	- .15	+ .60	+ .04		30	- .60	- .64	- .69	- .83	- .69
	40	+ .60	- .19	+ .16	- .41	+ .04		40	+ .01	- .46	- .66	- .13	- .31
	50	+ .19	+ .29	+ .04	+ .44	+ .24		50	- .66	.00	- .54	- .20	- .35
61	0	+ .25	+ .22	+ .25	+ .60	+ .33	71	0	- .33	+ .22	+ .59	- .16	+ .08
	10	- .11	+ .25	+ .48	+ .02	+ .16		10	- .02	+ .12	- .44	- .34	- .17
	20	+ .33	+ .48	+ .35	+ .24	+ .35		20	- .58	- .86	- .68	- .08	- .55
	30	+ .07	+ .59	- .38	+ .04	+ .08		30	- .66	- .41	- .43	- .58	- .52
	40	+ .19	+ .20	+ .02	+ .67	+ .27		40	- .58	- .67	- .64	- .59	- .62
	50	+ .21	+ .56	+ .25	- .34	+ .17		50	- .44	- .82	- .22	- .64	- .53
62	0	- .04	- .43	+1.03	- .80	- .06	72	0	- .23	- .34	+ .09	- .48	- .24
	10	- .08	- .05	- .23	.00	- .09		10	- .29	- .58	- .72	+ .31	- .32
	20	+ .14	- .19	- .21	+ .30	+ .01		20	- .77	- .26	- .17	-1.16	- .59
	30	- .12	+ .34	- .11	+ .29	+ .10		30	- .14	+ .02	- .89	- .35	- .34
	40	- .02	- .94	- .16	- .04	- .29		40	- .78	- .41	- .51	- .78	- .62
	50	- .09	- .27	- .15	- .21	- .18		50	- .09	- .52	+ .18	- .25	- .17
63	0	+ .01	+ .17	+ .14	- .08	+ .06	73	0	- .06	+ .13	- .16	+ .21	+ .03
	10	- .11	+ .04	- .14	- .31	- .13		10	+ .42	+ .05	+ .18	+ .43	+ .27
	20	- .17	+ .10	- .54	+ .33	- .07		20	+ .23	+ .02	+ .16	- .05	+ .09
	30	+ .03	- .26	- .83	- .02	- .27		30	+ .41	+ .31	+ .01	+ .27	+ .25
	40	- .66	- .82	- .13	- .19	- .45		40	+ .36	+ .44	+ .34	+ .42	+ .39
	50	- .01	- .27	+ .49	- .17	+ .01		50	+ .10	+ .43	+ .11	- .08	+ .14
64	0	- .28	+ .06	+ .36	- .66	- .13	74	0	- .04	+ .18	+ .92	+ .38	+ .36
	10	- .07	- .50	- .76	- .03	- .34		10	+ .17	+ .58	+ .09	+ .40	+ .31
	20	- .26	+ .45	- .22	- .21	- .06		20	+ .26	+ .30	+ .05	- .25	+ .09
	30	+ .28	- .06	+ .44	- .14	+ .13		30	+ .17	+ .12	- .07	+ .42	+ .16
	40	- .27	- .15	+ .19	- .09	- .08		40	+1.01	+ .04	+ .38	+ .53	+ .49
	50	- .41	- .31	.00	- .08	- .20		50	+ .26	- .05	+ .48	+ .43	+ .28
65	0	+ .04	+ .04	- .75	+ .19	- .12	75	0	- .05	+ .59	+ .53	- .07	+ .25
	10	- .71	.00	- .36	- .21	- .32		10	- .04	+ .06	+ .40	+ .46	+ .22
	20	- .27	- .62	-1.42	- .81	- .78		20	+ .58	+ .19	+ .21	+ .42	+ .35
	30	- .87	- .66	- .62	- .33	- .62		30	+ .11	+ .33	+ .40	- .28	+ .14
	40	- .75	- .14	- .39	-1.24	- .63		40	- .04	+ .15	+ .52	+ .41	+ .26
	50	- .36	- .54	- .27	- .43	- .40		50	- .30	+ .11	- .75	+ .66	- .07
66	0	+ .12	- .25	+ .38	- .05	+ .05	76	0	+ .10	+ .20	+ .17	+ .17	+ .16
	10	- .15	- .47	- .11	- .23	- .24		10	+ .37	- .40	- .04	+ .07	.00
	20	- .44	- .51	- .58	- .03	- .39		20	+ .01	+ .15	- .03	+ .07	+ .05
	30	+ .27	+ .79	- .64	+ .02	+ .11		30	+ .26	+ .22	+ .11	+ .05	+ .16
	40	- .14	-1.61	+ .04	+ .03	- .42		40	+ .20	+ .74	+ .59	+ .19	+ .43
	50	- .16	+ .84	+ .59	+ .17	+ .36		50	+ .62	+ .40	+ .75	+ .55	+ .58
67	0	+ .23	- .03	+ .28	- .24	+ .06	77	0	+ .66	+ .41	+ .15	+ .34	+ .39
	10	- .43	- .24	+ .11	+ .32	- .06		10	+ .93	+ .63	+ .21	+ .59	+ .59
	20	- .22	+ .63	- .38	- .67	- .16		20	+ .24	+ .57	+ .98	+ .57	+ .59
	30	+ .13	- .34	- .41	+ .22	- .10		30	+ .35	+ .65	+ .31	+ .17	+ .37
	40	- .30	- .29	- .20	+ .03	- .19		40	+ .10	- .08	+ .38	+ .24	+ .16
	50	- .26	- .40	-1.02	-1.40	- .77		50	+ .23	- 01	+ .33	+ .41	+ .24
68	0	+ .08	- .27	+ .05	- .46	- .15	78	0	+ .24	- .04	+ .44	+ .20	+ .21
	10	- .25	- .32	- .02	+ .43	- .04		10	- .32	+ .29	+ .57	- .22	+ .08
	20	- .32	+ .24	+ .46	+ .26	+ .16		20	+ .32	+ .13	- .05	+ .56	+ .24
	30	- .26	- .02	- .02	+ .02	- .07		30	+ .34	+ .13	- 36	+ .21	+ .08
	40	+ .22	- .43	- .35	- .48	- .26		40	+ .59	+ .05	- .58	- .62	- .14
	50	- .14	- .06	- .07	- .21	- .12		50	+ .18	+ .04	- .01	+ .15	+ .09
69	0	- .24	+ .06	- .17	- .45	- .20	79	0	+ .46	+ .69	- .11	+ .40	+ .36
	10	- .11	+ .46	- .26	+ .27	+ .09		10	- .18	+ .36	+ .15	+ .43	+ .19
	20	- .44	- .85	- .34	- .41	- .51		20	- .47	- .17	+ .48	+ .24	+ .02
	30	+ .25	- .69	+ .24	+ .44	+ .06		30	+ .26	- .04	+ .20	+ .06	+ .12
	40	- .45	- .03	- .43	+ .07	- .21		40	.00	- .13	+ .18	- .09	- .01
	50	+ .52	- .10	+ .14	- .04	+ .13		50	- .20	+ .23	- .78	- .01	- .19

		0°	+90°	+180°	+270°	Mean.			0°	+90°	+180°	+270°	Mean.
°	′	″	″	″	″	″	°	′	″	″	″	″	″
80	0	+0.20	−0.03	+0.35	+0.04	+0.14	85	0	+0.11	+0.25	+0.23	+0.17	+0.19
	10	+ .09	− .20	+ .34	− .11	+ .03		10	+ .05	+ .02	− .02	+ .43	+ .12
	20	− .37	− .25	− .10	− .04	− .19		20	+ .24	+ .16	− .06	+ .18	+ .13
	30	+ .35	+ .50	+ .41	+ .10	+ .34		30	− .07	− .18	+ .21	− .04	− .02
	40	− .09	− .13	+ .59	+ .03	+ .10		40	.00	+ .58	+ .11	− .01	+ .17
	50	− .04	+ .10	− .66	+ .08	− .13		50	+ .43	− .08	− .26	+ .07	+ .04
81	0	+ .24	+ .18	+ .22	+ .12	+ .19	86	0	+ .17	− .06	+ .04	+ .05	+ .05
	10	+ .35	+ .30	+ .24	+ .35	+ .31		10	+ .16	+ .22	+1.19	+ .03	+ .40
	20	+ .17	+ .38	+ .60	+ .77	+ .48		20	− .02	− .10	− .07	+ .23	+ .01
	30	+ .69	+ .44	+ .45	+ .34	+ .48		30	+ .51	+ .32	− .18	+ .23	+ .22
	40	+ .34	+ .04	+ .53	− .27	+ .16		40	− .07	+ .23	+ .58	+ .18	+ .23
	50	+ .19	+ .23	+ .02	+ .12	+ .14		50	+ .05	+ .06	+ .10	− .29	− .02
82	0	+ .77	+ .51	− .05	+ .37	+ .40	87	0	+ .15	+ .23	+ .19	− .37	+ .05
	10	+ .29	+ .43	+ .59	+ .61	+ .48		10	+ .03	− .02	− .40	+ .07	− .08
	20	+ .11	+ .61	+ .14	+ .46	+ .33		20	− .28	− .01	+ .15	+ .06	− .02
	30	+ .55	+ .13	+ .58	+ .26	+ .38		30	+ .14	+ .20	− .36	+ .54	+ .13
	40	+ .21	+ .31	+ .37	+ .39	+ .32		40	− .10	+ .10	+ .49	+ .23	+ .18
	50	+ .05	+ .44	− .01	+ .64	+ .28		50	− .34	− .12	− .23	+ .21	− .12
83	0	+ .36	+ .81	+ .79	− .04	+ .48	88	0	+ .29	− .50	+ .01	− .20	− .10
	10	+ .70	+ .34	+1.14	+ .34	+ .63		10	+ .35	+ .05	+ .30	− .34	+ .09
	20	+ .09	+ .18	− .15	+ .60	+ .18		20	− .18	+ .27	− .34	+ .09	− .04
	30	+ .20	− .04	+ .52	+ .04	+ .18		30	− .09	− .18	− .09	− .16	− .13
	40	+ .60	+ .58	+ .70	+ .40	+ .57		40	+ .22	− .07	− .27	− .12	− .06
	50	+ .41	+ .37	+ .77	+ .81	+ .59		50	− .17	− .04	− .68	+ .09	− .20
84	0	+ .51	+ .45	− .08	+ .40	+ .32	89	0	− .01	+ .39	+ .58	− .08	+ .22
	10	+ .37	− .04	+ .04	+ .23	+ .15		10	− .70	− .36	− .72	+ .02	− .44
	20	+ .09	+ .51	− .10	+ .30	+ .20		20	− .26	− .22	+ .51	+ .13	+ .04
	30	− .11	+ .37	− .02	.00	+ .06		30	+ .51	+ .03	+ .42	− .12	+ .21
	40	+ .29	− .17	+ .49	− .17	+ .11		40	+ .58	+ .16	+ .47	− .05	+ .29
	50	+ .10	+ .21	− .11	+ .32	+ .13		50	+ .29	− .03	− .11	− .07	+ .02

Mean Corrections. 2′ Divisions. Fixed Circle A.

One Degree.

°	′	″	°	′	″	°	′	″	°	′	″
43	50	−0.33	44	10	−0.24	44	30	−0.13	44	50	−0.19
	52	− .40		12	− .47		32	− .05		52	− .47
	54	− .12		14	− .28		34	− .52		54	− .41
	56	− .27		16	− .21		36	− .39		56	− .09
	58	− .35		18	− .35		38	− .23		58	− .37
44	0	+ .10	44	20	− .36	44	40	− .27	45	0	− .36
	2	− .09		22	− .41		42	− .31		2	− .03
	4	− .33		24	− .35		44	− .46		4	− .01
	6	− .32		26	− .32		46	− .65		6	− .28
	8	− .10		28	− .07		48	− .17		8	− .23
										10	− .12

MEAN CORRECTIONS. SPECIAL 2′ DIVISIONS. FIXED CIRCLE A.

° ′	″	° ′	″	° ′	″	° ′	″	° ′	″	° ′	″
1 36	+0.04	9 16	+0.12	22 56	−0.38	42 40	−0.45	55 56	+0.49	79 26	−0.09
38	+ .25	18	+ .14	58	− .20	42	− .39	58	+ .22	28	+ .28
40	+ .47	20	+ .27	23 0	− .12	44	− .53	56 0	+ .44	30	+ .12
2 0	+ .11	10 26	− .32	28 26	− .01	48 20	+ .43	61 26	− .18	80 36	+ .42
2	− .02	28	− .07	28	+ .06	22	+ .54	28	− .10	38	− .04
4	+ .22	30	− .04	30	− .12	24	− .25	30	+ .08	40	+ .10
2 20	+ .37	10 46	− .60	28 40	− .07	48 36	+ .56	66 50	+ .36	81 6	+ .27
22	+ .06	48	− .70	42	+ .03	38	+ .37	52	+ .15	8	+ .74
24	+ .32	50	− .55	44	− .22	40	+ .52	54	+ .24	10	+ .31
6 0	− .18	12 20	− .37	32 40	− .15	51 40	+ .22	67 46	− .84	81 36	+ .11
2	+ .05	22	− .68	42	− .26	42	− .10	48	− .80	38	+ .43
4	− .19	24	− .63	44	− .14	44	− .08	50	− .77	40	+ .16
6 20	− .14	16 50	− .44	33 56	− .50	52 30	− .16	70 46	− .71	82 6	+ .24
22	− .23	52	− .24	58	− .52	32	− .45	48	− .53	8	+ .19
24	− .37	54	− .38	34 0	− .30	34	− .49	50	− .35	10	+ .48
7 40	− .33	17 26	− .15	37 16	− .42	53 40	− .21	72 26	− .72	87 30	+ .13
42	− .52	28	− .24	18	− .10	42	− .09	28	− .64	32	+ .42
44	− .56	30	− .10	20	− .30	44	− .14	30	− .34	34	+ .18
8 10	+ .20	19 0	− .27	41 16	− .10	54 50	− .05	75 30	+ .14	87 46	− .29
12	+ .80	2	− .59	18	− .16	52	− .35	32	+ .21	48	− .45
14	+ .92	4	− .25	20	+ .12	54	− .09	34	− .02	50	− .12
8 46	+ .42	22 0	− .19	41 40	− .01	55 0	+ .25	79 6	+ .44	88 16	+ .18
48	+ .96	2	− .08	42	− .16	2	− .34	8	+ .45	18	− .18
50	+ .51	4	− .38	44	+ .03	4	− .34	10	+ .19	20	− .04

GRADUATION CORRECTIONS. MOVABLE CIRCLE B.

SEPARATE 10′ DIVISIONS. ONE DEGREE.

B	0°	+90°	+180°	+270°	Mean.
° ′	″	″	″	″	″
0 0	−0.60	+0.02	+0.25	+0.73	+0.10
10	+ .14	− .03	+ .36	− .15	+ .08
20	+ .03	+ .29	+ .34	+ .34	+ .25
30	+ .38	+ .33	+ .20	+ .09	+ .25
40	+ .59	+ .29	+ .03	+ .05	+ .24
50	+ .38	+ .46	+ .13	+ .23	+ .30
1 0	+ .53	+ .09	+ .18	+ .16	+ .24
Means,	+0.21	+0.21	+0.21	+0.21	+0.21

MEAN CORRECTIONS. 2′ DIVISIONS. B. ONE DEGREE.

° ′	″	° ′	″	° ′	″
0 0	+0.10	0 20	+0.25	0 40	+0.24
2	+ .21	22	− .41	42	+ .10
4	+ .15	24	− .07	44	+ .44
6	+ .07	26	− .15	46	+ .36
8	− .02	28	− .13	48	+ .04
0 10	+ .08	0 30	+ .25	0 50	+ .30
12	+ .16	32	+ .28	52	+ .41
14	− .25	34	+ .04	54	+ .41
16	+ .08	36	+ .23	56	+ .41
18	− .26	38	+ .19	58	+ .60
				1 0	+ .24

MEAN CORRECTIONS. 3° DIVISIONS. B.

° ′	″	° ′	″	° ′	″
0 0	+0.10	30 0	−0.04	60 0	+0.16
1 0	+ .24				
2 0	+ .51				
3 0	+ .43	33 0	− .24	63 0	− .06
6 0	+ .10	36 0	− .35	66 0	− .12
9 0	+ .14	39 0	− .27	69 0	− .02
12 0	+ .24	42 0	− .29	72 0	− .13
15 0	− .20	45 0	+ .04	75 0	− .01
18 0	+ .05	48 0	+ .03	78 0	+ .22
21 0	+ .23	51 0	− .19	81 0	+ .09
24 0	+ .05	54 0	− .18	84 0	− .03
27 0	+ .38	57 0	+ .08	87 0	+ .07
				88 0	− .16
				89 0	− .08
30 0	− .04	60 0	+ .16	90 0	+ .10

MISCELLANEOUS OBSERVATIONS.

The following short list of stars has been observed with the Meridian Circle, to furnish places for differential comparison with various objects. The original observations are given first, followed by a list of the positions reduced to 1900.0. The numbers in the last give the hours, minutes, and seconds, for 1900, in accordance with a general plan for numbering miscellaneous stars, followed in the two preceding Volumes of Meridian Circle work. The Precessions are computed with Newcomb's constants for the epoch: $m = 3^s.07234$; $n = 20''.047$.

Fifteen stars have been fully observed; and four Meridian observations of one comet are also recorded here.

COMPARISON STARS.

Star.	Mag.	Epoch.	R. A.	Decl.	No.		Observer.	Object.
			1902.0.	1902.0.				
			h m s	° ′ ″				
B. D. 2766 S. p.	10.	1902.49	16 37 20.94	+36 38 [25.44]	1	1	For E. E. Barnard.	(Cluster in Hercules)
2766 N. f.	9.5	02.42	16 37 29.54	+36 39 20.47	1	1	"	
2772	7.7	02.40	16 39 34.619	+36 41 35.47	3	2	"	
			1903.0.	1903.0.				
2766 S. p.	9.9	03.47	16 37 23.097	+36 38 20.92	2	2	"	
2772	7.7	03.47	16 39 36.772	+36 41 28.41	2	2	"	
B. D. 2939	9.4	03.33	15 11 4.026	+ 2 23 19.94	2	2	"	(Cluster)
2946	9.5	03.33	15 15 40.944	+ 2 28 8.56	2	2	"	
B. D. 502	9.1	03.02	3 4 29.840	+28 51 40.31	2	2	For R. F. Ferner.	(Eros Plates)
536	9.7	03.03	3 6 57.930	+29 40 49.76	4	3	"	
B. D. 520	8.5	03.02	3 31 33.222	+24 17 14.16	2	2	For W. L. Elkin.	(Pleiades)
617	8.1	03.03	3 42 27.444	+26 17 23.73	2	2		
530	8.3	03.02	3 42 57.972	+21 37 40.07	2	2		
600	8.0	03.02	3 53 17.104	+23 21 0.49	2	2		
B. D. 1162	9.3	03.03	5 59 42.404	+22 16 51.69	2	2	For C. D. Perrine.	(Neptune Satellite)
−27° 15188	9½	03.76	20 55 20.017	−26 58 33.29	2	2	For R. G. Aitken.	(Comet)
			1906.0.	1906.0.				
S. D. 9° 6090	9¼	06.74	22 51 47.874	− 9 26 21.67	2	2	For E. E. Barnard.	(Saturn IX)
6003	9	06.81	22 46 20.062	−10 3 13 57	2	2	"	
6006	8½	06.81	22 47 32.81	−10 3 . . .	1		"	

COMET *c* 1903. (BORRELLY.)

1903.	L.O.M.T.	App. R. A.	App. Decl.	Wt.	Log. p. Δ
	h m s	h m s	° ′ ″		
June 27	15 24 27.9	21 46 0.78	− 1 36 46.9	4	9.798
29	15 13 13.7	42 37.82	+ 1 11 22.2	1	9.770
30	15 7 16.2	40 35.89	+ 2 47 23.2	3	9.753
July 3	14 47 37.2	32 43.29	+ 8 36 20.1	3	9.681

COMPARISON STARS, REDUCED TO 1900.0.

No.	Mag.	R. A. 1900.0.	Decl. 1900.0.	Obs.	Precessions 1900.	
		h m s	° ′ ″		s	″
30419	9.1	3 4 19.032	+28 50 58.59	2	+3.6026	+13.906
30647	9.7	3 6 47.051	+29 40 8.51	3	3.6264	13.750
33122	8.5	3 31 22.564	+24 16 37.84	2	3.5528	12.108
34216	8.1	3 42 16.594	+26 16 49.73	2	3.6167	11.335
34247	8.3	3 42 47.442	+21 37 6.18	2	3.5099	11.298
35306	8.0	3 53 6.415	+23 20 28.87	2	3.5629	10.541
55931	9.3	5 59 31.544	+22 16 51.57	2	3.6200	+ 0.041
151054	9.4	15 10 54.933	+ 2 24 0.39	2	3.0309	−13.484
151531	9.5	15 15 31.858	+ 2 28 48.11	2	3.0287	13.183
163716	9.9	16 37 16.664	+36 38 42.16	3	2.1422	7.080
163725	9.5	16 37 25.26	+36 39 34.61	1	2.1415	7.068
163930	7.7	16 39 30.358	+36 41 49.18	4	2.1371	6.898
205509	9.5	20 55 9.326	−26 59 14.91	2	3.5636	+13.873
224601	9.0	22 46 1.175	−10 5 7.64	2	3.1478	19.011
224713	8.5	22 47 13.93	−10 5 . . .	1	3.1466	19.045
225129	9.2	22 51 29.046	− 9 28 16.62	2	3.1380	19.158

INSTRUMENTAL CONSTANTS.

Various observed constants and corrections are tabulated here, for three consecutive years. Collimation and Flexure were not often determined in this period, as the derivation of star places was mainly of a differential character.

The main record includes but thirty months of actual observation, of which considerable intervals were unavailable, on account of stormy weather. It is divided into groups, corresponding nearly to the individual seasons. A constant value of the collimation correction, combined with the Aberration, has been adopted, often, for a considerable interval. The values of *a* and *b* were always determined, and applied, to three places of decimals, but the tabulation of two places, only, shows more plainly the general performance of the instrument. The level correction has a small periodic change, with the seasons; and there is also a tendency toward continuous increase in the corrections, each year, up to the adjustment of the instrument, February 1, 1904. The correction appears to be smallest in the fall, and largest in the spring. The average residual, in the groups, is greater than the average difference of two successive values, which is an indication of periodic change.

In Azimuth the record shows mainly deviations of accidental character, though there is a tendency toward groups of nearly the same value for short periods. The average difference between successive corrections is greater than the average residuals, during the seasons; and the successive corrections often show very abrupt changes.

The record of the Mire indicates the uncertainty which would have been introduced in the value of the azimuth correction, by adopting a mean value for the position of the Meridian mark, for periods of several months. There is a decided difference in the separate seasons, the mark appearing to be farthest West in summer, and nearest the Meridian in spring. The difference might be ascribed to errors in the adopted places of the Circumpolar stars, used for determining the Azimuth correction, at different times of the year. But it is more likely to be due to a slight change in the position of the Meridian mark. This is situated at the edge of the level area, on the mountain top, about one hundred feet from the Meridian Circle. At that distance, a range of $0^s.1$, in the position of the Mire, corresponds to less than one hundredth of an inch. The maximum range is about $0^s.2$.

This subject will receive a thorough discussion in the reduction of the Fundamental observations, begun in 1905; when the Azimuth will be determined from successive transits of the same Circumpolar stars, at both culminations. There is also a small, but well-confirmed change, in the position of the Mire, during the night hours of observation, amounting to $0^s.01$ hourly. This has been noted for so long a period, that allowance is usually made for it, in deciding the rate of change in Azimuth of the instrument. Rates are not often adopted in azimuth; and very rarely in Level.

The Circle readings at the Nadir are included in the tabulated constants. There is not much evidence of systematic changes. The readings are smaller in summer and fall. The maximum range is 8″, and changes are abrupt and follow no law. It is quite common to adopt a rate during a night, especially when confirmed by the determination of the Equator points.

The values of the Latitude, derived from Circumpolar stars, and those derived from the Fundamental stars South of the zenith, are tabulated for each night. For the former, Auwers' corrected B. J. places have been adopted; and the last are from Newcomb's Declinations, as a rule, in this series. A few nights were reduced with Auwers' corrected 303, (for the Piazzi stars,) and the corrected Poulkova Refractions, from Volume VI. These have been inclosed in brackets. The mean of N. and S. will not be greatly affected by errors in the adopted Refractions, and the comparison of the two furnishes a basis for a determination of such errors, treated in detail, in previous sections of this volume. The mean value of (N—S) in this record is equivalent to a correction to the Refractions employed of $-0''.215$ tan Z. D., corresponding to a reduction in the Poulkova constant of 0.0043μ. The correction for the variation of the Latitude has been applied to the result of each night, from Chandler's formula:

$$\varphi - \varphi_0 = -0''.16 \cos\,[\lambda + (t - 2411790)\,0^\circ.85] - 0''.147 \cos\,(\odot - G);$$

where

$$\lambda = 122^\circ, \qquad G = 198^\circ.$$

This correction amounts, at the maximum, to $+0''.27$, in March, 1904, and $-0''.19$ in October, 1903.

The Latitudes appear to be systematically smallest in fall and winter; while the difference between N. and S. is smallest in winter and spring.

The record is closed by a brief summation of the groups for each season, in which the general performance of the instrument can be seen at a glance. It gives the number of months used for observation (including the gaps caused by storms), the nights of work, and the mean results, without regard to weights. In winter and spring nearly all the available nights were used; in summer not over half were required to complete the program.

A number of nights, when the instrument was used for the determination of clock correction, only, are not tabulated here.

INSTRUMENTAL CONSTANTS: CIRCLE WEST.

COLLIMATION CORRECTIONS.

Date.	c	t
1901.	s	°
June 3	−0.010	65
27	− .032	79
July 2	− .013	58
Aug. 8	− .006	78
Oct. 31	− .003	61
Dec. 19	− .006	66
1902.		
June 5	+ .025	67
9	+ .029	79
19	+ .010	80
25	− .006	63
July 9	+ .010	81
25	+ .013	76
Aug. 1	+ .010	81
13	+ .003	60
Sep. 4	− .045	83
5	− .023	82
15	− .013	77
25	+ .010	72
1903.		
Jan. 13	− .016	50
16	− .006	50
Feb. 26	− .010	50
Apr. 30	− .003	61
May 28	− .029	68
June 4	− .005	65
July 15	− .013	62
Oct. 6	+ .013	58
1904.		
Jan. 15	+ .008	56
Feb. 1	+ .019	54
Apr. 11	+ .006	75
May 5	+ .035	56
9	+ .045	71
Mean	0.000	67°
v	± .015	

FLEXURE CORRECTIONS.

Date.	f	t	Microm.
1901.	″	°	″
Oct. 31	+0.15	56	48.07
1903.			
June 4	− .05	65	48.02
July 15	+ .07	62	
1904.			
May 5	.00	56	47.98
Mean	+0.04	60	48.02

RUNS CORRECTION.

1901.	R
June to September	+0.10
November and December	+0.05
1902	+0.06
1903 and 1904	+0.05

VALUES OF TRANSIT INTERVALS. MEAN OF THREADS. FIXED CIRCLE WEST.

s	s	s	s	s	s	s
+12.075	+4.034	+1.988	−0.060	−2.010	−3.999	−12.028

INSTRUMENTAL CONSTANTS: CIRCLE WEST.

Date.	c′	b	a	Mire.	Wt.	t	Nadir.	φ N	φ S	N—S	Mean.	φ_0
1901.	s	s	s	s		°	″	″	″	″	″	″
June 3	-.027	-0.50	-0.11	0.94	2	55	23.03	25.08	25.99	-0.91	25.54	25.52
4	-.027	- .52	- .12	.94	3	56	23.42	26.02	26.10	- .08	26.06	26.04
6	-.027	- .49	- .06	.92	3	53	22.99	25.18	26.40	-1.22	25.79	25.77
7	-.027	- .52	- .18	.98	2	46	24.81	26.10	25.18	+ .92	25.64	25.62
10	-.027	- .50	- .11	.99	2	47	23.04	25.75	26.41	- .66	26.08	26.06
12	-.027	- .49	- .04	.99	3	47	23.60	25.63	25.75	- .12	25.69	25.67
13	-.027	- .47	+ .03	.95	3	53	23.03	25.40	26.14	- .74	25.77	25.75
17	-.027	- .49	- .07	1.02	3	60	23.06	26.13	25.97	+ .16	26.05	26.03
25	-.027	- .51	- .11	.98	3	52	23.56	25.23	25.85	- .62	25.54	25.52
26	-.027	- .47	+ .01	1.04	3	63	21.96	25.71	26.16	- .45	25.93	25.91
27	-.049	- .43	+ .21	1.01	4	75	19.53	25.32	26.06	- .74	25.69	25.67
28	-.049	- .43	+ .21	.96	4	78	19.62	25.35	25.95	- .60	25.65	25.63
July 2	-.030	- .51	- .31	1.03	2	52	22.77	27.00	26.06	+ .94	26.53	26.51
3	-.030	- .51	- .11	. .	3	57	22.26	. . .	26.05	. . .	. . .	. . .
5	-.030	- .44	+ .10	1.00	4	69	20.46	25.37	25.89	- .52	25.63	25.61
8	-.030	- .44	- .06	1.01	3	65	20.62	25.38	26.37	- .99	25.87	25.85
9	-.030	- .45	- .01	.99	4	68	21.03	25.22	25.65	- .43	25.44	25.42
11	-.030	- .44	- .02	.98	4	66	18.99	25.63	26.43	.80	26.03	26.01
12	-.030	- .45	- .19	1.03	3	56	22.07	25.27	26.39	1.12	25.83	25.81
16	-.030	- .47	+ .04	1.02	5	53	19.79	25.90	26.58	- .68	26.24	26.22
18	-.030	- .43	+ .08	.99	4	70	19.98	25.68	26.36	- .68	26.02	26.00
19	-.030	- .43	+ .06	.99	4	72	19.50	25.43	26.05	- .62	25.74	25.72
22	-.030	- .39	- .10	1.03	3	63	19.86	26.34	27.49	-1.15	26.91	26.89
24	-.030	- .44	+ .02	1.03	4	75	19.31	25.76	26.42	- .66	26.09	26.07
26	-.030	- .44	- .09	1.00	5	77	19.25	25.75	26.27	- .52	26.01	25.99
29	-.030	- .45	- .13	1.01	3	78	19.54	24.40	26.61	-2.21	25.51	25.49
Aug. 2	-.023	- .44	+ .03	1.01	4	78	18.68	25.29	26.05	- .76	25.67	25.65
6	-.023	- .42	+ .11	1.06	4	70	18.95	25.21	25.81	- .60	25.51	25.49
7	-.023	- .45	+ .05	.97	4	71	19.17	25.34	25.98	- .64	25.66	25.64
8	-.023	- .44	+ .04	1.04	4	73	18.45	25.39	26.23	- .84	25.81	25.79
12	-.023	- .41	+ .02	1.01	4	77	17.92	24.75	26.29	-1.54	25.52	25.50
13	-.023	- .42	- .06	1.07	4	73	17.48	25.94	26.46	- .52	26.20	26.18
14	-.023	- .41	- .02	1.01	3	72	18.75	24.69	25.79	-1.10	25.24	25.22
15	-.023	- .41	+ .09	1.01	4	72	18.85	25.46	26.06	- .60	25.76	25.74
19	-.023	- .38	+ .03	1.01	4	67	18.58	25.25	26.27	-1.02	25.76	25.74
20	-.023	- .35	+ .08	1.04	3	58	19.91	26.27	25.97	+ .30	26.12	26.10
21	-.023	- .33	- .08	. .	3	53	20.10	. . .	26.38	. . .	. . .	. . .
Means,	-.028	- .446	- .021	1.001		64.0	20.64	25.53	26.15	-0.62	25.84	25.82
v,		± .034	± .085	± .027			±1.69	±0.38	±0.26	±0.38	±0.25	±0.25
1901.												
Nov. 1	-.020	-0.26	+0.25	0.93	2	51	21.00	(26.36)	(24.61)	. . .	. . .	. . .
4	-.020	- .32	+ .13	1.01	4	62	20.37	25.63	25.98	-0.35	25.80	25.78
5	-.020	- .31	+ .13	.96	4	60	20.81	25.40	25.78	- .38	25.59	25.57
7	-.020	- .33	+ .02	.97	4	54	21.65	25.35	26.05	- .70	25.70	25.68
8	-.020	- .31	+ .04	.96	3	48	21.37	25.74	26.06	- .32	25.90	25.88
12	-.020	- .20	+ .18	.94	4	47	21.06	25.37	25.93	- .56	25.65	25.63
13	-.020	- .24	+ .17	.94	3	47	21.26	25.25	26.01	- .76	25.63	25.61
18	-.020	- .25	+ .17	1.02	3	48	21.35	25.77	25.56	+ .21	25.66	25.63
22	-.020	- .26	+ .24	.92	3	52	21.04	25.52	25.76	- .24	25.64	25.61
Means,	-.020	- .275	+ .148	0.960		52.1	21.10	25.50	25.89	-0.39	25.70	25.68
v,		± .035	± .061	± .026			±.27	±.16	±.14	± .21	±.08	±.08
1901.												
Dec. 16	-.023	-0.29	+0.09	0.95	3	57	20.88	26.00	26.00	.00	26.00	25.96
17	-.023	- .32	+ .05	1.00	3	65	21.39	26.01	25.56	+ .45	25.78	25.74
18	-.023	- .36	- .07	.99	4	58	21.76	25.76	25.90	- .14	25.83	25.79
19	-.023	- .40	- .13	.97	4	55	22.03	25.36	25.84	- .48	25.60	25.56
20	-.023	- .40	- .14	.95	4	55	22.22	26.17	25.59	+ .58	25.88	25.84
26	-.023	- .37	- .13	.96	2	48	22.64	24.99	25.68	- .69	25.34	25.30
30	-.023	- .37	- .13	.96	3	50	22.23	25.32	25.98	- .66	25.65	25.61
1902.												
Jan. 3	-.017	- .40	- .07	.89	3	52	21.72	26.34	26.10	+ .24	26.22	26.18
6	-.017	- .42	- .09	.87	4	56	21.67	25.80	25.84	- .04	25.82	25.78
7	-.017	- .42	- .16	.92	3	50	22.28	26.17	25.84	+ .33	26.00	25.96
9	-.017	- .42	- .15	.88	2	45	22.36	26.08	26.17	- .09	26.12	26.08
10	-.017	- .42	- .10	.93	3	49	22.25	26.68	25.86	+ .82	26.27	26.23
28	-.017	- .34	+ .07	. .	2	26	24.40	. . .	25.88	. . .	. . .	. . .
Feb. 4	-.017	- .38	+ .09	.89	3	36	23.09	25.91	26.40	- .49	26.16	26.12
Means,	-.020	- .379	-0.62	0.935		50.1	22.21	25.89	25.90	-0.01	25.90	25.86
v,		± .032	± .079	± .031			±.54	±.34	±.16	± .38	±.21	±.21

Date.	c′	b	a	Mire.	Wt.	t	Nadir.	φ N	φ S	N—S	Mean.	φ₀
1902.	s	s	s	s		°	"	"	"	"	"	"
Mar. 27	-.017	-0.55	+0.13	0.88	3	46	23.54	25.81	25.85	-0.04	25.83	25.81
28	-.017	- .60	+ .16	. . .	3	45	23.19	26.05	26.03	+ .02	26.04	26.02
Apr. 3	-.017	- .57	+ .10	.86	3	44	23.15	25.97	26.03	- .06	26.00	25.99
10	-.017	- .59	+ .11	.84	3	41	24.18	25.27	25.75	- .48	25.51	25.51
14	-.017	- .65	+ .17	.84	4	55	23.23	25.55	26.12	- .57	25.83	25.83
15	-.017	- .64	+ .13	.84	3	49	23.30	26.29	26.51	- .22	26.40	26.40
May 8	-.017	- .61	+ .09	.87	2	53	21.77	24.78	26.21	- 1.43	25.50	25.53
22	-.017	- .61	+ .14	.94	3	46	22.71	25.58	25.59	- .01	25.59	25.64
23	-.017	- .60	+ .14	.94	4	51	22.44	25.26	26.09	- .83	25 68	25.73
27	-.017	- .64	+ .02	.92	4	53	22.99	25.52	26.02	- .50	25.77	25.82
30	-.017	- .63	+ .09	.90	2	41	23.55	25.01	25.77	- .76	25.39	25.45
Means,	-.017	- .607	+ .117	0.883		47.6	23.10	25.55	25.99	-0.44	25.77	25.79
v,		± .023	± .035	± .034			±.45	±.35	±.19	± .35	±.22	±.20
1902.												
June 2	-.011	-0.57	+0.16	0.94	3	46	22.47	25.12	26.45	-1.33	25.78	25.84
3	-.004	- .58	+ .19	.86	3	51	22.11	25.00	26.09	-1.09	25.55	25.61
4	+.002	- .57	+ .23	.84	3	57	21.73	25.34	26.22	- .88	25.78	25.85
6	+.009	- .58	+ .02	.84	3	57	22.20	25.36	26.56	-1.20	25.96	26.03
9	+.012	- .60	+ .09	.85	4	71	20.65	25.44	26.32	- .88	25.88	25.95
13	+.002	- .64	- .25	.85	3	52	23.83	25.62	26.39	- .77	26.00	26.08
16	+.002	- .61	+ .01	.84	4	65	21.57	25.57	26.26	- .69	25.91	25.99
18	-.007	- .60	+ .04	.89	4	68	19.97	(25.31)	(26.31)	*	25.81	25.89
19	-.007	- .60	+ .04	.93	4	71	19.14	(25.38)	(26.66)	*	26.02	26.10
23	-.023	- .58	- .16	.98	2	56	20.09	24.66	26.86	-2.20	25.76	25.85
25	-.023	- .65	- .09	.95	2	57	20.25	25.28	27.44	-2.16	26.36	26.45
July 2	-.017	- .61	- .16	.95	3	45	23.77	24.67	26.67	-2.00	25.67	25.77
7	-.017	- .56	+ .10	.95	3	64	20.16	25.42	26.21	- .79	25.81	25.91
9	-.007	- .55	+ .09	. . .	3	66	. . .	. . .	. . .	. . .	. . .	. . .
10	-.007	- .57	+ .02	. . .	3	70	. . .	. . .	. . .	. . .	. . .	. . .
14	-.007	- .59	- .16	. . .	3	56	. . .	. . .	. . .	. . .	. . .	. . .
15	-.007	- .58	- .05	. . .	4	63	. . .	. . .	. . .	. . .	. . .	. . .
17	-.007	- .58	+ .02	.92	4	68	19.14	25.84	26.28	- .44	26.06	26.16
18	-.007	- .58	+ .01	.93	5	70	17.70	26.31	27.17	- .86	26.74	26.84
28	-.004	- .56	+ .05	.97	4	63	18.47	24.93	26.29	-1.36	25.61	25.72
29	-.004	- .57	.00	.97	4	60	20.03	25.37	26.05	- .68	25.71	25.82
Aug. 4	-.007	- .53	+ .07	.95	5	74	18.58	24.99	26.05	-1.06	25.52	25.63
6	-.007	- .56	+ .03	.94	4	76	18.48	25.73	25.99	- .26	25.86	25.97
11	-.014	- .55	+ .01	.92	3	61	18.73	(25.64)	(25.88)	*	25.76	25.87
12	-.014	- .50	- .04	.97	3	59	19.14	(25.65)	(25.70)	*	25.68	25.79
19	-.014	- .47	+ .16	.93	3	58	19.69	(24.99)	(25.73)	*	25.36	25.46
21	-.014	- .48	+ .14	.93	4	63	18.61	25.19	26.15	- .96	25.67	25.77
25.	-.014	- .49	+ .07	.93	3	61	18.51	24.93	25.89	- .96	25.41	25.51
Means,	-.008	- .568	+ .022	0.918		61.7	20.21	25.30	26.38	-1.08	25.82	25.91
v,		± .030	± .084	±.038			±1.37	±.31	±.30	± .40	±.20	±.20
1902.												
Sep. 3	-.017	-0.49	+0.03	0.93	3	76	16.89	25.08	26.16	-1.08	25.62	25.71
4	-.017	- .47	+ .05	.90	3	73	16.63	25.04	26.39	-1.35	25.71	25.80
11	-.040	- .53	- .05	1.08	4	77	16.63	25.34	26.46	-1.12	25.90	25.99
12	-.040	- .54	- .05	1.08	5	75	16.48	25.44	26.37	- .93	25.90	25.99
17	-.030	- .49	- .13	1.03	3	58	17.76	24.98	26.39	-1.41	25.69	25.77
18	-.030	- .49	- .03	1.05	4	57	18.04	24.82	26.11	-1.29	25.46	25.54
22	-.007	- .41	+ .25	. . .	4	62	17.13	24.77	26.35	-1.58	25.56	25.63
26	-.007	- .38	+ .27	.96	4	63	16.78	24.97	26.07	-1.10	25.52	25.59
29	-.007	- .39	+ .17	.97	4	62	17.78	25.73	26.25	- .52	25.99	26.05
30	-.007	- .37	+ .15	.94	3	61	18.47	25.59	25.67	- .08	25.63	25.69
Oct. 1	-.017	- .41	+ .07	. . .	3	61	18.77	. . .	26.10	. . .	. . .	. . .
2	-.017	- .42	+ .01	1.07	5	62	18.42	25.51	25.21	+ .30	25.36	25.42
3	-.017	- .42	+ .08	.95	3	58	19.44	25.95	25.89	+ .06	25.92	25.98
15	-.017	- .35	+ .17	. . .	3	53	19.50	25.33	25.92	- .59	25.63	25.67
16	-.017	- .36	+ .17	.96	3	52	19.77	(25.71)	(26.13)	*	25.92	25.95
17	-.017	- .39	+ .16	.98	2	54	19.62	(25.93)	(25.61)	*	25.77	25.80
27	-.017	- .32	+ .24	.87	3	49	19.97	(25.33)	(26.17)	*	25.75	25.76
29	-.017	- .35	+ .21	.91	3	52	20.09	25.72	25.68	+ .04	25.70	25.71
31	-.017	- .36	+ .13	.89	3	41	21.81	24.83	26.58	-1.75	25.70	25.71
Nov. 4	-.017	- .39	+ .16	.86	3	48	22.30	25.08	25.89	- .81	25.49	25.49
5	-.017	- .40	+ .12	.97	4	50	21.89	25.72	25.96	- .24	25.84	25.84
6	-.017	- .42	+ .02	1.08	3	51	21.00	25.30	25.64	- .34	25.47	25.46
21	-.017	- .32	+ .12	.92	2	38	22.80	25.51	25.61	- .10	25.56	25.52
24	-.017	- .31	+ .16	.85	2	38	22.98	25.23	26.10	- .87	25.67	25.62
25	-.017	- .35	+ .14	.87	3	42	22.32	24.86	26.18	-1.32	25 52	25.47
26	-.017	- .38	+ .14	.89	3	44	22.35	25.66	25.90	- .24	25.78	25.73
28	-.017	- .44	+ .13	. . .	2	36	22.35	. . .	. . .	. . .	. . .	. . .
Means,	-.018	- .406	+ .111	0.956		55.3	19.55	25.29	26.04	-0.74	25.68	25.71
v,		± .047	± .076	±.060			±1.82	±.30	±.26	±.52	±.14	±.14

*Corrections applied to Poulkova Refractions.

Date.	c′	b	a	Mire.	Wt.	t	Nadir.	φ N	φ S	N—S	Mean.	φ_0
1902.	s	s	s	s		°	″	″	″	″	″	″
Dec. 1	-.017	-0.42	+0.20	. . .	2	45	22.45	. . .	26.26	. . .	. .	. . .
2	-.017	- .45	+ .07	0.88	2	41	23.04	24.89	25.83	-0.94	25.36	25.29
6	-.017	- .44	+ .12	. . .	3	46	22.77	. . .	25.95	. . .	. . .	. . .
12	-.017	- .40	+ .07	.82	3	33	23.41	25.49	26.00	- .51	25.74	25.65
13	-.017	- .34	+ .09	.77	3	32	24.52	24.89	25.95	-1.06	25.42	25.33
16	-.017	- .40	+ .07	.85	3	34	24.45	25.73	25.57	+ .16	25.65	25.55
22	-.017	- .50	+ .02	.93	4	46	23.12	24.83	25.83	-1.00	25.33	25.22
24	-.017	- .54	+ .05	.95	3	53	22.76	25.44	26.40	- .96	25.92	25.80
29	-.017	- .55	+ .03	.92	4	39	23.46	25.89	25.59	+ .30	25.74	25.61
30	-.017	- .52	+ .08	.88	3	41	24.16	25.29	25.53	- .24	25.41	25.28
1903.												
Jan. 5	-.017	- .57	+ .05	.88	4	61	24.21	24.73	25.19	- .46	24.96	24.82
6	-.017	- .59	.00	. . .	2	55	23.83	. . .	26.13	. . .	. . .	. . .
8	-.017	- .53	- .13	.88	3	39	24.36	25.37	26.57	-1.20	25.97	25.83
10	-.017	- .55	- .06	.88	3	42	24.06	25.33	25.63	- .30	25.48	25.34
12	-.017	- .56	- .03	.92	3	47	23.00	(26.66)	(26.20)	*	26.43	26.28
13	-.033	- .55	- .03	.92	2	50	23.14	(25.80)	(26.16)	*	25.98	25.83
14	-.033	- .54	- .09	.92	4	46	23.63	25.09	25.96	- .87	25.53	25.38
15	-.023	- .53	- .14	.93	4	42	23.11	26.63	25.87	+ .76	26.25	26.10
16	-.023	- .51	- .06	.90	4	41	23.34	26.26	25.92	+ .34	26.09	25.94
Feb. 10	-.027	- .50	+ .14	.87	3	44	23.19	25.81	25.85	- .04	25.83	25.65
16	-.027	- .55	+ .12	.80	3	35	24.03	25.56	26.10	- .54	25.83	25.65
17	-.027	- .58	+ .13	.84	3	40	23.56	25.22	25.96	- .74	25.59	25.41
20	-.017	- .64	+ .06	.85	4	45	24.00	24.74	25.79	-1.05	25.26	25.09
24	-.027	- .63	- .04	.87	2	42	24.53	(25.99)	(26.72)	*	26.35	26.18
25	-.027	- .64	- .03	.90	3	39	24.69	(25.85)	(26.12)	*	25.99	25.82
26	-.027	- .64	+ .07	.85	4	44	23.33	24.98	26.16	-1.18	25.57	25.40
27	-.027	- .64	+ .09	.88	4	44	23.11	25.82	25.88	- .06	25.85	25.68
Means,	-.021	- .530	+ .031	0.878		41.5	23.60	25.40	25.91	-0.48	25.73	25.59
v,		± .060	± .070	±.031			±.54	±.40	±.21	± .48	±.29	±.28
1903.												
Mar. 9	-.017	-0.58	+0.10	0.80	3	39	23.69	(24.80)	(26.42)	*	25.61	25.45
11	-.023	- .60	+ .08	.85	3	43	23.51	25.49	26.37	-0.88	25.93	25.77
Apr. 22	-.020	- .61	+ .10	.88	3	49	22.88	25.19	26.09	- .90	25.64	25.56
23	-.020	- .63	+ .07	.94	4	53	22.69	26.13	25.74	+ .39	25.93	25.85
24	-.020	- .66	+ .18	.87	3	53	22.90	24.99	25.57	- .58	25.28	25.21
27	-.020	- .67	- .01	.92	3	43	23.53	25.37	26.57	-1.20	25.97	25.91
29	-.020	- .66	+ .13	.88	5	53	23.38	(25.85)	(26.14)	*	25.99	25.93
30	-.020	- .65	+ .06	.92	3	55	22.19	(26.57)	(26.33)	*	26.45	26.39
May 1	-.020	- .65	+ .09	.89	4	58	21.02	25.95	26.43	- .48	26.19	26.14
4	-.020	- .66	- .01	.93	4	63	21.68	25.66	25.88	- .22	25.77	25.73
5	-.020	- .68	- .03	.90	4	58	22.68	(25.97)	(25.87)	*	25.92	25.88
6	-.020	- .66	- .12	. . .	2	52	22.61	. . .	26.12	. . .	. . .	. . .
8	-.020	- .65	- .03	.95	3	60	21.70	26.40	26.12	+ .28	26.26	26.23
11	-.020	- .64	- .01	.90	3	58	21.63	26.18	26.70	- .52	26.44	26.42
12	-.020	- .65	+ .01	.93	4	61	21.23	25.80	26.31	- .51	26.06	26.04
14	-.020	- .68	- .12	.94	3	54	22.42	24.94	26.00	-1.06	25.47	25.46
15	-.020	- .61	- .02	.93	2	48	22.38	26.52	26.36	+ .16	26.44	26.43
25	-.046	- .57	+ .14	.98	3	52	21.29	25.81	26.15	- .34	25.98	26.00
27	-.046	- .60	+ .03	.97	3	51	21.87	25.29	26.54	-1.25	25.92	25.95
28	-.046	- .58	+ .18	.96	4	62	20.98	25.88	26.04	- .16	25.96	25.99
Means,	-.024	- .634	+ .040	0.911		53.2	22.31	25.71	26.19	-0.48	25.96	25.91
v,		± .029	± .072	± .034			±.73	±.40	±.25	± .40	±.22	±.25
1903.												
June 2	-.022	-0.70	-0.23	0.97	3	47	23.12	26.26	26.34	-0.08	26.30	26.35
3	-.022	- .62	- .11	.98	3	51	21.87	25.85	27.15	-1.30	26.50	26.55
10	-.020	- .65	- .17	.97	4	63	20.88	26.27	26.31	- .04	26.29	26.36
11	-.020	- .65	- .10	.99	3	59	21.09	26.26	26.13	+ .13	26.19	26.26
18	-.017	- .53	+ .13	. . .	3	61	20.53	. . .	26.51	. . .	. . .	. . .
23	-.017	- .55	+ .13	. . .	3	65	19.76	. . .	26.06	. . .	. . .	. . .
27	-.017	- .60	+ .04	. . .	4	71	19.45	. . .	25.40	. . .	. . .	. . .
29	-.017	- .63	- .12	. . .	3	62	21.62	. . .	25.88	. . .	. . .	. . .
30	-.017	- .60	.00	. . .	3	64	20.54	. . .	25.79	. . .	. . .	. . .
July 3	-.017	- .56	+ .04	. . .	4	69	19.38	. . .	25.50	. . .	. . .	. .
Means,	-.019	- .609	- .040	0.975		61.2	20.82	26.16	26.11	-0.32	26.32	26.38
v,		± .039	± .107				±.89		±.38			

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*Corrections applied to Poulkova Refractions.

Date.	c′	b	a	Mire.	Wt.	t	Nadir.	φ N	φ S	N—S	Mean.	$\varphi_\circ$
1903.	s	s	s	s		°	"	"	"	"	"	"
Oct. 5	-.004	-0.37	+0.37	0.93	3	53	22.12	25.34	25.74	-0.40	25.54	25.73
6	-.004	- .40	+ .40	.90	3	58	21.20	25.26	25.70	- .44	25.48	25.67
Nov. 10	-.017	- .41	+ .18	.92	3	41	22.65	24.83	25.82	- .99	25.33	25.42
25	-.017	- .46	+ .32	.89	3	53	22.34	24.17	25.70	-1.53	24.93	24.96
Means,	-.010	- .41	+ .32	0.91		51	22.08	24.90	25.74	-0.84	25.32	25.44
1903.												
Dec. 1	-.017	-0.51	+0.24	0.92	2	54	22.60	23.84	25.35	-1.51	24.60	24.61
7	-.017	- .51	+ .10	.97	3	50	23.33	24.85	25.51	- .66	25.18	25.16
9	-.017	- .50	+ .09	. . .	4	56	23.31	. . .	25.65	. . .	. . .	. . .
14	-.007	- .43	+ .27	.87	3	48	22.26	25.15	25.62	- .47	25.39	25.36
21	-.007	- .45	+ .26	.88	2	41	24.51	24.71	25.45	- .74	25.08	25.01
22	-.007	- .49	+ .24	.86	3	43	24.55	25.62	25.30	+ .32	25.46	25.38
24	-.007	- .47	+ .22	.91	3	51	23.91	25.63	25.61	+ .02	25.62	25.53
28	-.007	- .58	+ .19	.87	4	56	23.57	24.88	25.72	- .84	25.30	25.20
29	-.007	- .63	+ .14	.91	4	55	23.79	24.17	25.43	-1.26	24.80	24.69
1904.												
Jan. 7	-.007	- .65	+ .21	.92	3	47	23.06	24.74	25.45	- .71	25.10	24.96
11	-.007	- .69	+ .20	.90	2	46	24.16	25.17	25.31	- .14	25.24	25.09
12	-.009	- .75	+ .28	.90	3	52	23.89	24.96	25.38	- .42	25.17	25.02
14	-.009	- .81	+ .16	.91	3	47	24.51	25.86	25.70	+ .16	25.78	25.62
15	-.009	- .83	+ .12	.92	4	52	24.69	25.68	25.78	- .10	25.73	25.56
25	-.009	- .92	+ .15	.86	4	43	23.39	25.40	25.96	- .56	25.68	25.48
28	-.011	- .95	+ .12	.91	3	44	23.58	26.03	25.55	+ .48	25.79	25.58
29	-.011	-1.02	+ .09	.94	3	48	24.44	24.86	25.42	- .56	25.14	24.93
Means,	-.010	- .659	+ .182	0.903		47.8	23.74	25.10	25.54	-0.44	25.32	25.20
v,		± .159	± .055	±.023			±.57	±.46	±.15	± .42	±.28	±.26
Adjusted Level.												
1904.												
Feb. 1	+.002	-0.16	+0.28	0.81	4	48	21.19	24.90	25.91	-1.01	25.40	25.19
2	+.002	- .20	+ .30	.79	4	49	20.75	25.00	25.73	- .73	25.37	25.16
Mar. 1	-.017	- .31	+ .46	. . .	2	46	19.68	24.73	25.78	-1.05	25.26	25.00
2	-.017	- .33	+ .48	.81	2	50	19.46	25.60	26.12	- .52	25.86	25.59
31	-.017	- .40	+ .47	.80	3	44	20.43	26.32	25.95	+ .37	26.14	25.88
Apr. 9	-.011	- .50	+ .49	. . .	3	64	20.57	26.20	25.86	+ .34	26.03	25.79
10	-.011	- .52	+ .40	.87	4	66	19.25	25.85	26.00	- .07	25.93	25.69
11	-.011	- .51	+ .44	.75	4	65	19.32	25.94	25.68	+ .26	25.81	25.57
12	-.011	- .53	+ .31	.76	2	53	21.84	25.52	26.02	- .50	25.77	25.53
13	-.011	- .48	+ .28	.81	3	49	20.60	25.88	26.28	- .40	26.08	25.84
17	-.011	- .43	+ .29	.84	3	49	20.89	25.70	25.78	- .08	25.74	25.51
23	-.011	- .36	+ .42	.76	2	36	22.00	25.58	26.68	-1.10	26.13	25.91
24	-.017	- .44	+ .50	.79	3	46	20.68	25.82	26.38	- .56	26.10	25.79
29	-.017	- .35	+ .45	.73	3	40	21.00	25.41	26.29	- .88	25.85	25.66
May 4	+.018	- .46	+ .42	.75	3	51	21.94	25.25	26.22	- .97	25.74	25.56
Means,	-.009	- .399	+ .400	0.790		50.4	20.64	25.58	26.04	-0.46	25.81	25.58
v,		± .062	± .071	±.031			±.69	±.36	±.22	± .42	±.21	±.20

MEAN RESULTS.

	Months.	Nights.	Temp.	c′	b	a	Mire.	Nadir.	φ N	φ S	Mean.	φ_0
SUMMER.			°	s	s	s	s	″	″	″	″	″
	3	37	64	−.028	−0.45	−0.02	1.00	20.64	25.53	26.15	25.84	25.82
	3	28	62	−.008	− .57	+ .02	0.92	20.21	25.30	26.38	25.82	25.91
	1	10	61	−.019	− .61	− .04	.98	20.82	26.16	26.11	26.32	26.38
Sum,	7	75										
Means.			62	−.018	− .54	−0.01	0.97	20.56	25.66	26.21	25.99	26.04
FALL.												
	1	9	52	−.020	−0.28	+0.15	0.96	21.10	25.50	25.89	25.70	25.68
	3	27	55	−.018	− .41	+ .11	.96	19.55	25.29	26.04	25.68	25.71
	2	4	51	−.010	− .41	+ .32	.91	22.08	24.90	25.74	25.32	25.44
Sum,	6	40										
Means,			53	−.016	−0.37	+0.19	0.94	20.91	25.23	25.89	25.57	25.61
WINTER.												
	3	14	50	−.020	−0.38	−0.06	0.94	22.11	25.89	25.90	25.90	25.86
	3	27	41	−.021	− .53	+ .03	.88	23.60	25.40	25.91	25.73	25.59
	3	17	48	−.010	− .66	+ .18	.90	23.74	25.10	25.54	25.32	25.20
Sum,	9	58										
Means,			46	−.017	−0.52	+0.05	0.91	23.15	25.46	25.78	25.65	25.58
SPRING.												
	3	11	48	−.017	−0.61	+0.12	0.88	23.10	25.55	25.99	25.77	25.79
	3	20	53	−.024	− .63	+ .04	.91	22.31	25.71	26.19	25.96	25.91
	2	15	50	−.009	(− .40)	+ .40	.79	20.64	25.58	26.04	25.81	25.58
Sum,	8	46										
Means,			50	−.017	−0.62	+0.19	0.86	22.02	25.61	26.07	25.85	25.76
Sum,	30	219	°	s	s	s	s	″	″	″	″	″
Means of Groups,			53	−.017	−0.50	+0.10	0.92	21.67	25.49	25.99	25.76	25.74

REDUCTION TO MIDDLE THREAD: FIXED CIRCLE WEST. 1905–1906.

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°
	s	s	s	s	s	s	s	s	s	s	s	s	s
	12.14	12.14	12.15	12.16	12.17	12.19	12.21	12.23	12.26	12.29	12.33	12.37	12.41
	4.08	4.08	4.08	4.09	4.09	4.10	4.11	4.11	4.12	4.13	4.15	4.16	4.17
	+2.05	+2.05	+2.05	+2.05	+2.05	+2.05	+2.05	+2.06	+2.06	+2.07	+2.07	+2.08	+2.09
	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
	−1.95	−1.95	−1.95	−1.95	−1.95	−1.95	−1.96	−1.96	−1.96	−1.97	−1.98	−1.98	−1.99
	3.95	3.95	3.95	3.96	3.96	3.97	3.97	3.98	3.99	4.00	4.01	4.03	4.04
	11.97	11.97	11.98	11.99	12.00	12.02	12.04	12.06	12.09	12.12	12.16	12.19	12.23
Mean 7	+.057	+.057	+.057	+.057	+.057	+.057	+.057	+.057	+.057	+.057	+.057	+.057	+.058
Mean 5	+.046	+.046	+.046	+.046	+.046	+.046	+.046	+.046	+.046	+.046	+.046	+.046	+.046

	13°	14°	15°	16°	17°	18°	19°	20°	21°	22°	23°	24°	25°
	s	s	s	s	s	s	s	s	s	s	s	s	s
	12.46	12.51	12.57	12.63	12.69	12.76	12.84	12.92	13.00	13.09	13.19	13.29	13.40
	4.19	4.21	4.23	4.25	4.27	4.29	4.32	4.34	4.37	4.40	4.43	4.47	4.51
	+2.10	+2.11	+2.11	+2.12	+2.14	+2.15	+2.16	+2.18	+2.19	+2.21	+2.22	+2.24	+2.25
	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
	−2.00	−2.01	−2.02	−2.03	−2.04	−2.05	−2.06	−2.07	−2.08	−2.10	−2.12	−2.13	−2.15
	4.06	4.07	4.09	4.11	4.13	4.15	4.18	4.21	4.23	4.26	4.29	4.33	4.36
	12.28	12.34	12.39	12.45	12.52	12.59	12.66	12.74	12.82	12.91	13.00	13.10	13.21
Mean 7	+.058	+.058	+.059	+.059	+.059	+.059	+.060	+.060	+.061	+.061	+.061	+.062	+.062
Mean 5	+.047	+.047	+.047	+.047	+.048	+.048	+.048	+.048	+.049	+.049	+.049	+.050	+.050

	26°	27°	28°	29°	30°	31°	32°	33°	34°	35°	36°	37°	38°
	s	s	s	s	s	s	s	s	s	s	s	s	s
	13.51	13.62	13.75	13.88	14.02	14.16	14.31	14.47	14.64	14.82	15.01	15.20	15.40
	4.54	4.58	4.62	4.67	4.71	4.76	4.82	4.87	4.93	4.98	5.05	5.11	5.18
	+2.28	+2.30	+2.32	+2.34	+2.36	+2.38	+2.41	+2.44	+2.47	+2.50	+2.53	+2.56	+2.59
	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
	−2.17	−2.18	−2.20	−2.23	−2.25	−2.27	−2.30	−2.32	−2.35	−2.38	−2.41	−2.44	−2.47
	4.40	4.44	4.48	4.52	4.56	4.61	4.66	4.71	4.77	4.83	4.89	4.95	5.01
	13.32	13.43	13.56	13.69	13.82	13.96	14.11	14.27	14.44	14.61	14.80	14.99	15.19
Mean 7	+.063	+.064	+.064	+.065	+.065	+.066	+.067	+.067	+.068	+.069	+.070	+.071	+.072
Mean 5	+.050	+.051	+.051	+.052	+.052	+.053	+.054	+.054	+.055	+.055	+.056	+.057	+.058

REDUCTION TO MIDDLE THREAD: FIXED CIRCLE WEST. 1905–1906. (*Con.*)

	39°	40°	41°	42°	43°	44°	45°	46°	47°	48°	49°
	s	s	s	s	s	s	s	s	s	s	s
	15.62	15.85	16.08	16.34	16.60	16.87	17.17	17.47	17.80	18.14	18.50
	5.25	5.33	5.41	5.49	5.58	5.68	5.77	5.88	5.99	6.10	6.22
	+2.63	+2.67	+2.71	+2.75	+2.79	+2.84	+2.89	+2.94	+3.00	+3.06	+3.12
	-2.50	-2.54	-2.58	-2.62	-2.66	-2.71	-2.75	-2.80	-2.86	-2.91	-2.97
	5.09	5.16	5.24	5.32	5.40	5.49	5.59	5.69	5.80	5.91	6.03
	15.40	15.63	15.86	16.11	16.37	16.64	16.93	17.23	17.55	17.89	18.24
Mean 7	+.073	+.074	+.075	+.076	+.077	+.079	+.080	+.081	+.083	+.084	+.086
Mean 5	+.058	+.059	+.060	+.061	+.062	+.063	+.064	+.065	+.066	+.068	+.069
	50°	51°	52°	53°	54°	55°	56°	57°	58°	59°	60°
	s	s	s	s	s	s	s	s	s	s	s
	18.88	19.29	19.72	20.17	20.65	21.17	21.71	22.29	22.91	23.57	24.28
	6.35	6.49	6.63	6.78	6.95	7.12	7.30	7.50	7.70	7.93	8.16
	+3.18	+3.25	+3.32	+3.40	+3.48	+3.56	+3.66	+3.75	+3.86	+3.97	+4.09
	-3.03	-3.10	-3.16	-3.23	-3.31	-3.40	-3.48	-3.57	-3.67	-3.78	-3 89
	6.15	6.28	6.42	6.57	6.73	6.89	7.07	7.26	7.46	7.68	7.91
	18.62	19.02	19.44	19.89	20.36	20.87	21.41	21.98	22.59	23.24	23.94
Mean 7	+.088	+.090	+.092	+.094	+.096	+.099	+.101	+.104	+.107	+.110	+.113
Mean 5	+.071	+.072	+.074	+.075	+.077	+.079	+.081	+.083	+.086	+.088	+.091
	60°.0	60°.5	61°.0	61°.5	62°.0	62°.5	63°.0	63°.5	64°.0	64°.5	65°.0
	s	s	s	s	s	s	s	s	s	s	s
	24.28	24.65	25.04	25.44	25.86	26.29	26.74	27.20	27.69	28.20	28.72
	8.16	8.29	8.42	8.56	8.70	8.84	9.00	9.15	9.32	9.48	9.66
	+4.09	+4.15	+4.22	+4.28	+4.35	+4.43	+4.50	+4.58	+4.66	+4.75	+4.84
	-3.89	-3.95	-4.02	-4.08	-4.15	-4.22	-4.29	-4.36	-4.44	-4.52	-4.61
	7.91	8.03	8.15	8.28	8.42	8.56	8.71	8.86	9.02	9.18	9.35
	23.94	24.31	24.69	25.09	25.50	25.92	26.37	26.83	27.31	27.80	28.32
Mean 7	+.113	+.115	+.117	+.119	+.121	+.123	+.125	+.127	+.129	+.132	+.134
Mean 5	+.091	+.092	+.094	+.095	+.097	+.098	+.100	+.102	+.104	+.105	+.107
	65°.0	65°.5	66°.0	66°.5	67°.0	67°.5	68°.0	68°.5	69°.0	69°.5	70°.0
	s	s	s	s	s	s	s	s	s	s	s
	28.72	29.27	29.84	30.44	31.07	31.72	32.40	33.12	33.87	34.66	35.49
	9.66	9.85	10.04	10.24	10.45	10.67	10.90	11.14	11.39	11.66	11.94
	+4.84	+4.93	+5.03	+5.13	+5.23	+5.34	+5.46	+5.58	+5.70	+5.84	+5.98
	-4.61	-4.70	-4.79	-4.88	-4.98	-5.09	-5.20	-5.31	-5.43	-5.56	-5.69
	9.35	9.53	9.72	9.92	10.12	10.33	10.55	10.79	11.03	11.29	11.56
	28.32	28.86	29.43	30.02	30.63	31.28	31.95	32.66	33.40	34.18	35.00
Mean 7	+.134	+.136	+.139	+.142	+.145	+1.48	+.151	+.154	+.157	+.161	+.165
Mean 5	+.107	+.109	+.112	+.114	+.116	+.119	+.121	+.124	+.127	+.130	+.133

Circumpolar Stars: Upper Culmination. Fixed Circle West. 1905–1906.

	21 Cass. 74° 28′	43 H. Ceph. 85° 45′	α Urs. Min. 88° 48′	40 Cass. 72° 33′	50 Cass. 71° 58′	36 H. Cass. 72° 24′	47 H. Ceph. 79° 3′	48 H. Ceph. 77° 23′	5 H. Cam. 71° 2′	Gr. 750. 85° 18′	Gr. 848. 75° 46′	19 H. Cam. 79° 7′
	s			s	s	s	s	s	s		s	s
	45.33	s	m s	40.48	39.21	40.15	63.91	55.57	37.35	s	49.37	64.29
	15.25	55.10	3 14.96	13.62	13.19	13.50	21.50	18.69	12.56	49.83	16.61	21.62
	+ 7.63	+27.58	+1 37.60	+ 6.82	+ 6.60	+ 6.76	+10.76	+ 9.36	+ 6.29	+24.94	+ 8.31	+10.83
	− 7.27	−26.27	−1 32.97	− 6.49	− 6.29	− 6.44	−10.25	− 8.91	− 5.99	−23.76	− 7.92	−10.31
	14.76	53.34	3 8.76	13.18	12.77	13.07	20.81	18.10	12.16	48.24	16.08	20.94
	44.70	. . .	. . .	39.92	38.67	39.59	63.02	54.80	36.83	. . .	48.68	63.40
Mean 7	+ 0.21	. . .	. . .	+ 0.19	+ 0.18	+ 0.19	+ 0.30	+ 0.26	+ 0.17	. . .	+ 0.23	+ 0.30
Mean 5	+ 0.17	+ 0.61	+2.17	+ 0.15	+ 0.15	+ 0.15	+ 0.24	+ 0.21	+ 0.14	+ 0.55	+ 0.18	+ 0.24

	Gr. 966. 74° 59′	22 H. Cam. 69° 21′	23 H. Cam. 79° 40′	51 H. Ceph. 87° 12′	Gr. 1374. 74° 10′	Br. 1147. 76° 3′	1 H. Dr. 81° 45′	d Urs. Maj. 70° 15′	Gr. 1586. 73° 20′	9 H. Dr. 76° 12′	λ Draco. 69° 51′	4 H. Dr. 78° 9′
	s	s	s		s	s	s	s	s	s	s	s
	46.85	34.42	67.67	m s	44.49	50.35	84.60	35.92	42.32	50.89	35.24	59.11
	15.76	11.58	22.76	1 23.58	14.97	16.94	28.45	12.08	14.24	17.12	11.85	19.88
	+ 7.89	+ 5.80	+11.39	+41.84	+ 7.49	+ 8.48	+14.24	+ 6.05	+ 7.13	+ 8.57	+ 5.93	+ 9.95
	− 7.51	− 5.52	−10.85	−39.86	− 7.14	− 8.08	−13.57	− 5.77	− 6.79	− 8.16	− 5.65	− 9.48
	15.26	11.21	22.04	1 20.92	14.49	16.40	27.55	11.70	13.78	16.57	11.48	19.25
	46.20	33.94	66.73	. . .	43.87	49.65	83.42	35.42	41.74	50.18	34.75	58.29
Mean 7	+ 0.22	+ 0.16	+ 0.31	. . .	+ 0.21	+ 0.23	+ 0.39	+ 0.17	+ 0.20	+ 0.24	+ 0.16	+ 0.28
Mean 5	+ 0.18	+ 0.13	+ 0.25	+ 0.93	+ 0.17	+ 0.19	+ 0.31	+ 0.13	+ 0.16	+ 0.19	+ 0.13	+ 0.22

	ϰ Draco. 70° 19′	Gr. 2001. 72° 53′	4 Urs. Min. 78° 0′	β Urs. Min. 74° 33′	γ Urs. Min. 72° 10′	ζ Urs. Min. 78° 5′	19 Urs. Min. 76° 7′	A. Draco. 68° 58′	ε Urs. Min. 82° 12′	ψ Dr. Aus. 72° 12′	35 Draco. 76° 59′	δ Urs. Min. 86° 37′
	s	s	s	s	s	s	s	s	s	s	s	
	36.04	41.24	58.38	45.57	39.64	58.79	50.59	33.82	89.44	39.71	53.90	s
	12.12	13.87	19.64	15.33	13.33	19.77	17.02	11.38	30.09	13.36	18.13	69.18
	+ 6.07	+ 6.94	+ 9.83	+ 7.67	+ 6.67	+ 9.90	+ 8.52	+ 5.69	+15.06	+ 6.69	+ 9.07	+34.63
	− 5.78	− 6.62	− 9.36	− 7.31	− 6.36	− 9.43	− 8.12	− 5.42	−14.35	− 6.37	− 8.64	−32.99
	11.74	13.43	19.01	14.84	12.91	19.14	16.47	11.01	29.13	12.93	17.55	66.98
	35.54	40.67	57.57	44.93	39.09	57.97	49.89	33.35	88.20	39.16	53.15	. . .
Mean 7	+ 0.17	+ 0.19	+ 0.27	+ 0.21	+ 0.18	+ 0.27	+ 0.24	+ 0.16	+ 0.42	+ 0.19	+ 0.25	. . .
Mean 5	+ 0.13	+ 0.15	+ 0.22	+ 0.17	+ 0.15	+ 0.22	+ 0.19	+ 0.13	+ 0.33	+ 0.15	+ 0.20	+ 0.77

	χ Draco. 72° 41′	τ Draco. 73° 10′	λ Urs. Min. 89° 0′	ε Draco. 70° 1′	ϰ Ceph. 77° 26′	73 Draco. 74° 38′	76 Draco. 82° 11′	Br. 2777. 77° 45′	β Ceph. 70° 9′	24 Ceph. 71° 52′	π Ceph. 74° 52′	γ Ceph. 77° 6′
	s	s		s	s	s	s	s	s	s	s	s
	40.78	41.92	m s	35.52	55.79	45.81	89.25	57.21	35.75	39.00	46.50	54.37
	13.72	14.10	3 53.95	11.95	18.77	15.41	30.02	19.24	12.03	13.12	15.64	18.29
	+ 6.87	+ 7.06	+1 57.12	+ 5.98	+ 9.39	+ 7.71	+15.03	+ 9.63	+ 6.02	+ 6.57	+ 7.83	+ 9.16
	− 6.54	− 6.72	−1 51.56	− 5.70	− 8.95	− 7.35	−14.32	− 9.18	− 5.74	− 6.26	− 7.46	− 8.72
	13.28	13.65	3 46.50	11.57	18.17	14.92	29.07	18.63	11.64	12.70	15.14	17.71
	40.21	41.33	. . .	35.03	55.02	45.17	88.01	56.41	35.25	38.46	45.85	53.62
Mean 7	+ 0.19	+ 0.20	. . .	+ 0.17	+ 0.26	+ 0.21	+ 0.42	+ 0.27	+ 0.17	+ 0.18	+ 0.22	+ 0.25
Mean 5	+ 0.15	+ 0.16	+ 2.60	+ 0.13	+ 0.21	+ 0.17	+ 0.33	+ 0.21	+ 0.13	+ 0.15	+ 0.17	+ 0.20

ERRATA.

VOLUME VI, LICK OBSERVATORY PUBLICATIONS.

The following errors have been noted, in the last preceding volume of Meridian Circle observations. There are a few typographical errors, besides, of small importance:

Page 211—No. 211, for 54′, read 55′.
313—No. 211, for 54′, read 55′, same star as the preceding.
230—No. 67, for 50′, read 40′.
322—No. 67, for 50′, read 40′, same star as the preceding.
332—No. 309, for 18^s, read 8^s.
332—No. 311, for 54′, read 55′.
321—No. 168. This is correct. No. 169 should be + in Piazzi; and the footnote may be struck out.

VOLUME X, LICK OBSERVATORY PUBLICATIONS.

Page 166—No. 868, Proper Motion in Declination should be —0″.17.